SERVICE MANUAL

AEP Model Chassis No. SCC-507A-A



XE-2 CHASSIS

August, 1983

#### **SPECIFICATIONS**

Television system Color system Zweiton system

Channel coverage

Programing system

Picture tube

Antenna

Audio output

Inputs

Outputs

CCIR TV standards (system B, G and H)

PAL

Two-carrier system VHF channels E2-U20 UHF channels E21-E68

30 programs

Automatic programing digital tuning Approx. 52 cm (20 inches)

100-degree deflection Trinitron system

(Approx. 49 cm screen measured diagonally 75-ohm standard antenna socket

(DIN45325/IEC169-2)

5 W + 5 W (with 10% harmonic distortion) AV connector (6-pin DIN)

Video input: 1.0V p-p, impedance 75 ohms, sync negative

Audio input: 0.1-2 Vrms

impedance more than 10 kilohms

AV connector (6-pin DIN)

Video output: 1.0 V p-p, impedance 75 ohms, sync negative

Audio output: 0.1-2 Vrms impedance less than 1 kilohm Audio output connector (5-pin DIN) Recording output: 1 mVrms/kilohm Line output: variable, 0-2 Vrms (max.) impedance less than 1 kilohm External speaker terminals (2-pin DIN)

For 4-8 ohm speakers

Headphones jack (stereo phone jack)

220-240 V ac, 50 Hz

105 W (Approx. 11 W in standby condition)

Approx. 522 × 502 × 513 mm (w/h/d)

Approx. 31 kg (68 lb 6 oz) Remote Commander RM-635

#### Optional accessories

Power requirements

Power consumption

Accessory supplied

**Dimensions** 

Weight

OPK-102 SECAM adaptor

VMC-366 video monitor cable (6-pin to 6-pin) VMC-368 video monitor cable (6-pin to 8-pin) RK-140 connecting cord (6-pin to BNC and phono)

Design and specifications are subject to change without notice.



TRINITRON® COLOR TV TELETEXT SONY



#### SAFETY-RELATED COMPONENT WARNING!

COMPONENTS IDENTIFIED BY SHADING AND MARK

\( \hat{\Lambda}\) ON THE SCHEMATIC DIAGRAMS, EXPLODED
VIEWS AND IN THE PARTS LIST ARE CRITICAL TO
SAFE OPERATION. REPLACE THESE COMPONENTS
WITH SONY PARTS WHOSE PART NUMBERS APPEAR
AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS
PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS
THAT ARE CRITICAL TO SAFE OPERATION ARE
IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE
REPLACED OR IMPROPER OPERATION IS SUSPECTED.

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# SECTION 1 GENERAL

#### 1-1. WARNING

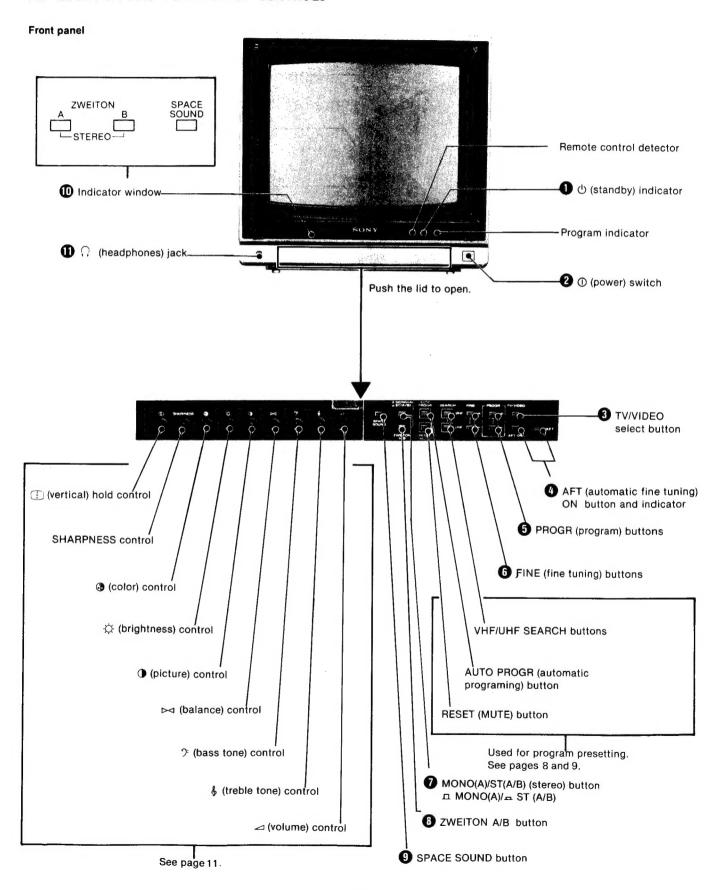
To prevent fire or shock hazard, do not expose the set to rain or moisture.

Dangerously high voltages are present inside the set. Do not open the cabinet. Refer servicing to qualified personnel only.

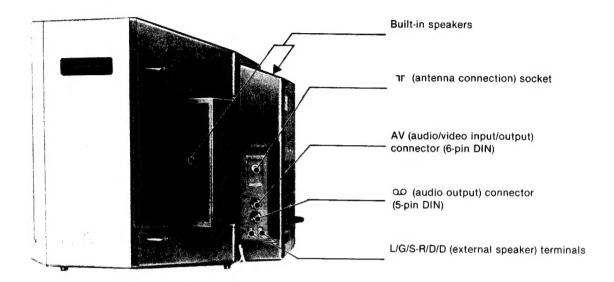
#### 1-2. FEATURES

- Remote control color television with a multi-function Remote Commander
- Reception of all VHF and UHF channels based on CCIR TV standards and PAL color system
- Easy and stable tuning of up to 30 programs
- Two convenient systems of program presetting: automatic programing and manual programing
- Built-in Zweiton decoder for stereo sound and dual-sound program reception in West Germany
- Energy-saving quick start picture system
- Smoked glass over the screen for a glare-free picture with optimum contrast
- An optional OPK-103 teletext adaptor can be installed in the KV-2052EC. (For installation, consult your nearest Sony dealer.)
- SECAM color signals from East Germany can be received by installing an optional OPK-102 SECAM adaptor. (For installation, consult your nearest Sony dealer.)

#### 1-3. LOCATION AND FUNCTION OF CONTROLS



#### Rear panel



#### (standby) indicator

Lights up when the TV is turned off with the Remote Commander. When any of the buttons on the Remote Commander is pressed, this lamp blinks.

#### **②** ① (power) switch

Press to turn the TV on. Press again to turn it off. When this switch is turned off, you cannot turn the power on with the supplied Remote Commander.

#### **❸ TV/VIDEO** select button

When playing back a video tape recorder without a 6-pin DIN connector, press this button so that "FU" lights in the program indicator. When playing back a recorder equipped with a 6-pin DIN connector, the video mode is automatically selected.

#### AFT (automatic fine tuning) ON button and indicator

The AFT circuit activates automatically after the stations are tuned and memorized in automatic and manual programing.

The indicator will illuminate. In case you want to restore the AFT on the channel which has been fine-tuned manually with the FINE buttons press the AFT ON button.

#### 9 PROGR (program) buttons

Press either + or - to select a preset program from positions 1 through 30. The selected program number will appear on the program indicator. Note that program 30 is "0" on the program indicator. Press + for higher-numbered programs, and - for lower-numbered programs. Programs will be changed continuously in sequence. If there is annoying noise at an unused program position, eliminate it by pressing the RESET (MUTE) button.

#### • FINE (fine tuning) buttons

Keep either + or - depressed to get a clear picture for each unsatisfactory channel. The automatic fine-tuning circuit will be automatically deactivated on the channel fine-tuned with these buttons.

#### ● MONO(A)/ST(A/B) (stereo) button □ MONO(A) □ ST(A/B)

Normally set this button to the depressed ST(A/B) position. Stereo programs and dual-sound program can be received.

When this button is not depressed, MONO(A) position, stereo programs will be monaural and only channel A of a dual-sound program will be received.

#### ZWEITON A/B button

When the ST(A/B) is pushed in, dual-sound programs can be received. Select the language to be listened to — A or B — by pressing the ZWEITON A/B button.

#### SPACE SOUND button

Press to get special acoustic effects (for example, more presence). The SPACE SOUND indicator willI illuminate. To disengage, press it again.

#### (Indicator window

#### SPACE SOUND indicator

#### **©** ZWEITON STEREO indicators

When a dual-sound program is received while the ST(A/B) button is pressed, A or B will light up. When a stereo program is received while the ST(A/B) button is pressed, A and B indicators will light up.

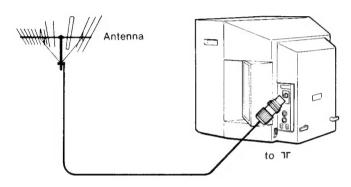
#### 

Connect headphones here. Speaker sound will be disconnected. If your headphones' plug does not fit the jack, use an optional plug adaptor.

#### 1-4. CONNECTIONS

#### **ANTENNA CONNECTION**

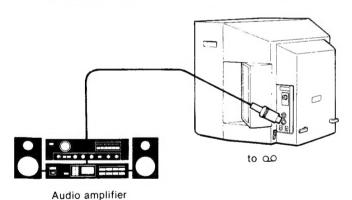
Good picture and sound are obtained when a proper antenna is used. Your TV receiver is equipped with a standard antenna connection socket, which is effective for both VHF and UHF reception. Use a coaxial antenna connection cable equipped with a single plug, and insert the plug into the TF (antenna connection) socket of your TV.



When a video tape recorder is to be connected to the TF socket of the TV, connect an antenna to the recorder, as explained in "To enjoy video tape playback".

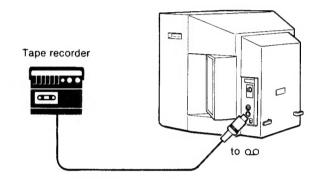
#### **CONNECTION WITH AN AMPLIFIER**

If you connect your stereo amplifier to the  $\infty$  connector (5-pin DIN) using a suitable connecting cord, you can listen to the TV sound from the speakers of your audio system. The sound control settings on the TV and the Remote Commander will be operable.



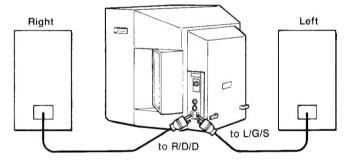
#### **CONNECTION WITH A TAPE RECORDER**

If you connect a tape recorder to the  $\infty$  connector (5-pin DIN) using a suitable connecting cord, you can record the TV sound. In this case, the sound control settings on the TV and the Remote Commander have no effect on the recording.



#### **CONNECTION WITH EXTERNAL SPEAKERS**

Connect external speakers to the speaker terminals on the rear of the TV.



For further details, refer to the instructions furnished with the speakers.

#### Notes

- Keep the speaker system away from the TV, as the magnets in the speakers may affect the TV screen.
- Never connect a speaker system to an amplifier and this TV simultaneously, as this may damage the TV.

#### 1-5. PROGRAM PRESETTING

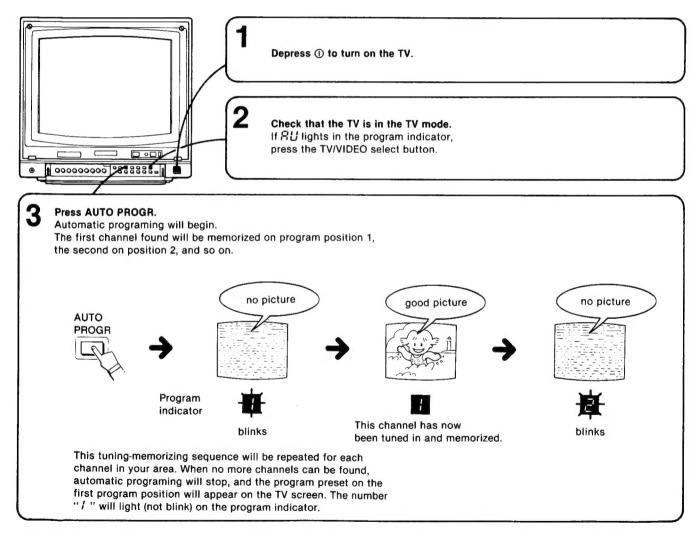
This TV has 30 program positions. Once you preset the channels broadcast in your area, program selection is simply made by pressing the PROGR buttons on the TV or the hand-held Remote Commander.

Preset programs by following one of these procedures; automatic programing or manual programing.

#### **AUTOMATIC PROGRAMING**

With the automatic programing system, receivable VHF and UHF channels in your area can be preset automatically in numerical sequence; from the lowest frequency VHF channel through the highest UHF channel.

If a channel you wish to preset is not strong enough to be preset with the automatic programing system, use the manual programing.



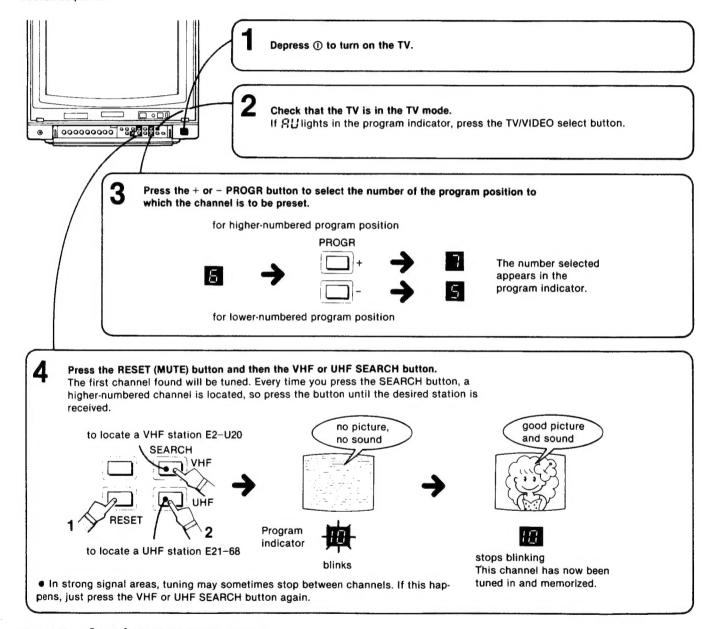
After presetting has been completed, press the PROGR buttons to check the results of the automatic programing, referring to your local TV listings.

To cancel automatic programing  $\,$  while it is in progress, press the RESET (MUTE) button or the + or - PROGR button.

#### MANUAL PROGRAMING

With the manual program search system, the channels you want can be preset in a desired sequence.

Any channel can be set to any program position. Consult your local TV listings to find out the active channels in your area. Make a list of your desired VHF and UHF channels and arrange them in a desired sequence.



Repeat steps 3 and 4 for all the desired channels.

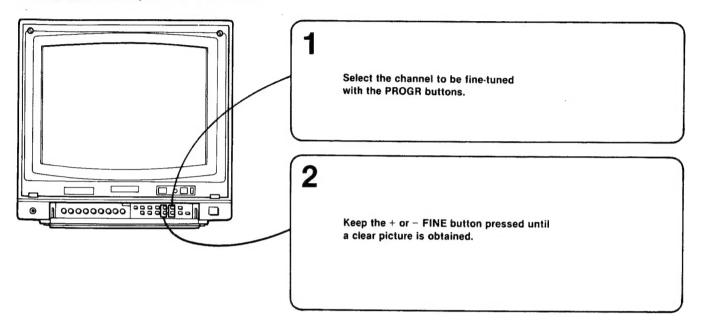
#### **RESET (MUTE) button**

If this button is pressed, the set will be automatically tuned to a frequency below channel E2.

If you want to skip a particular program position when scanning with the PROGR buttons on the Remote Commander, press the RESET (MUTE) button when the indicator shows that position.

#### FINE-TUNING OF A WEAK STATION

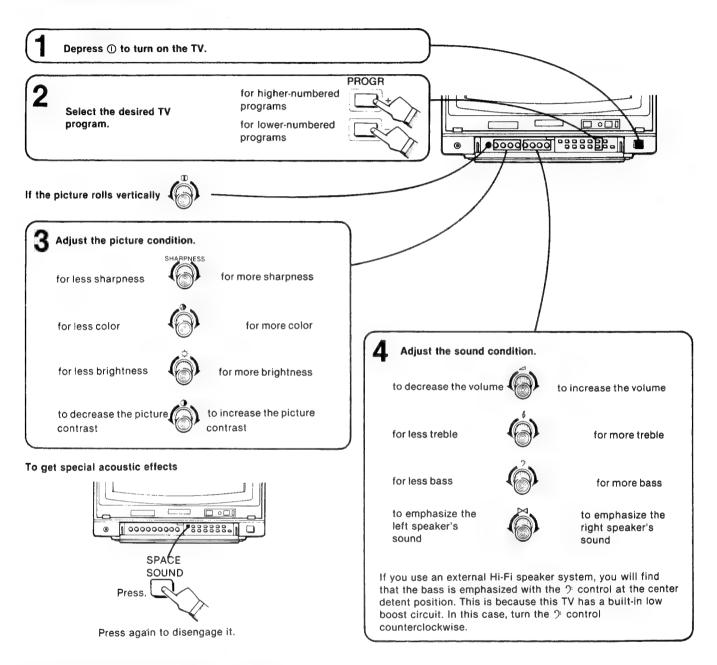
If you cannot obtain a clear picture on a particular channel, fine-tune that station manually with the  ${\sf FINE}$  buttons.



When either of the FINE buttons is pressed, the AFT (automatic fine tuning) on the selected channel is deactivated and the AFT indicator turns off. To view the fine-tuned station, keep the AFT deactivated (do not press the AFT ON button).

When other memorized stations are selected, the AFT activates automatically.

#### 1-6. BASIC OPERATION ON THE PANEL



This switch is especially effective when listening to music or a sports program. For instance, when you are listening to a piano concerto, the piano will be clearly heard from the center, and the orchestra, reverberation and applause will be heard as "surround" sounds.

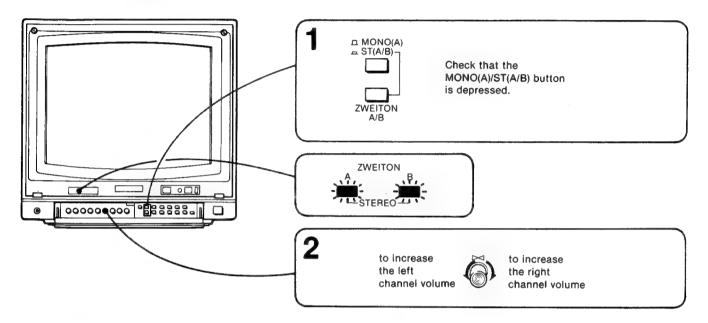
#### 1-7. TO ENJOY STEREO AND DUAL-SOUND PROGRAMS

Check that the MONO(A)/ST(A/B) button is in the depressed ST(A/B) position.

When a stereo program is received, STEREO indicators light up.

The TV automatically operates in the stereo mode when a stereo program is received.

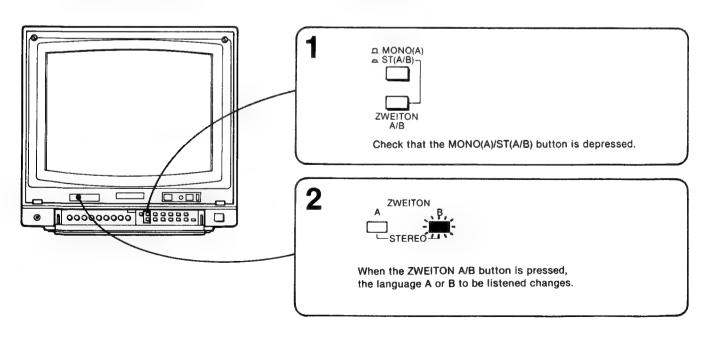
If necessary, adjust the stereo balance with the Implication of the optimum stereo effect.



Check that the MONO(A)/ST(A/B) button is in the depressed ST(A/B) position.

When a dual-sound(bilingual) program is received, either A or B indicator lights up.

Select the local language (usually broadcast on channel A) or the original language (usually broadcast on channel B) by pressing the ZWEITON A/B button on the TV or the A/B button on the Remote Commander.

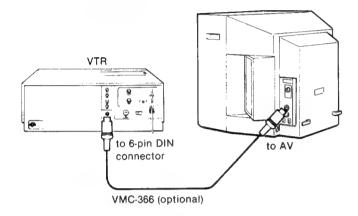


### 1-8. TO ENJOY VIDEO TAPE PLAYBACK

#### **USING THE AV CONNECTOR (6-PIN DIN)**

With a recorder equipped with a 6-pin DIN connector

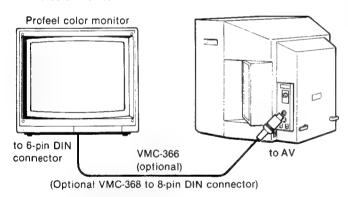
#### Connection



#### Operation

Turn on the TV and the recorder. When the recorder is set into the playback mode, the TV will be set into the video mode automatically and the playback picture will appear on the TV screen.

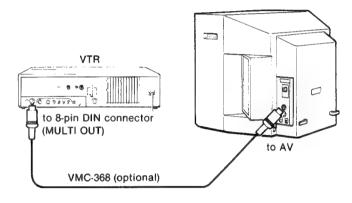
#### With a color monitor



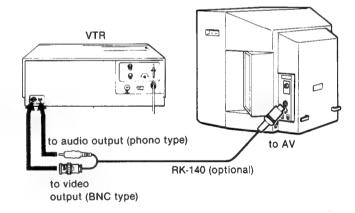
It is possible to view the same TV program on the monitor connected to the  $\ensuremath{\mathsf{AV}}.$ 

#### With a recorder without a 6-pin DIN connector

### Connection Example 1:



#### Example 2:



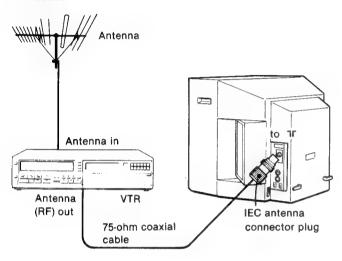
#### Operation

Turn on the TV and the recorder. Press the TV/VIDEO select button on the TV or the VIDEO button on the Remote Commander so that  $S_{\rm C}^{\rm c}$  lights in the program indicator. The TV is then set into the video mode. Play the tape back.

#### **USING THE ANTENNA CONNECTION SOCKET**

#### With a recorder equipped with an RF modulator

#### Connection



Keep a VTR away from the TV, if the display or sound is affected.

#### Operation

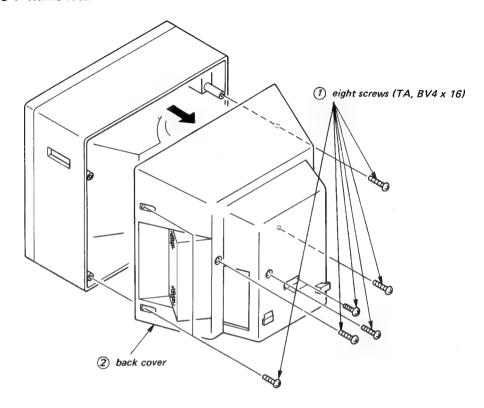
Preset one of the program positions of the TV to the output signal of the recorder as follows.

- 1 Turn on the TV and recorder.
- 2 Be sure that the TV is in the TV mode.
- 3 Set the TEST SIGNAL switch to ON if equipped with your recorder, or apply the output signal of the recorder to the TV by setting the recorder into the playback mode.
- 4 Select the program position to be set for the recorder with the PROGR buttons.
- 5 Push either of the SEARCH buttons. When the recorder output signal is found and memorized, the playback picture of the recorder will appear on the screen.

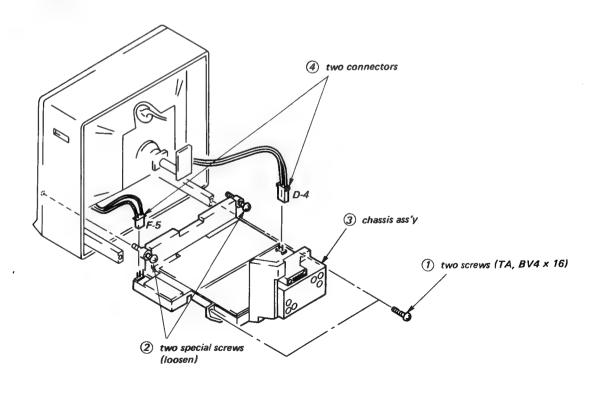
For operation of the recorder, refer to the instruction manual of the recorder.

# SECTION 2 DISASSEMBLY AND REPLACEMENT

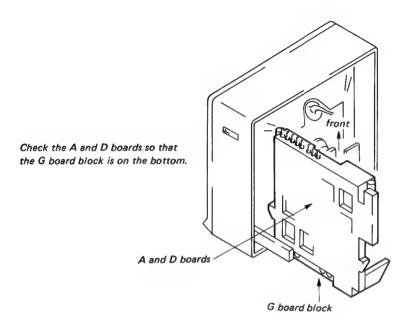
#### 2-1. BACK COVER ASS'Y REMOVAL



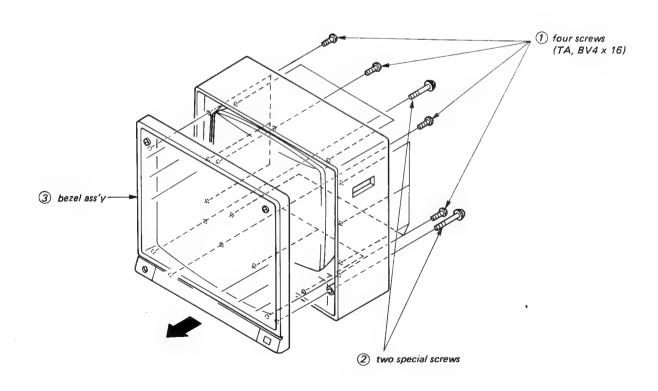
## 2-2. CHECKING FOR A AND D BOARDS UP (1) (CHASSIS ASS'Y REMOVAL)



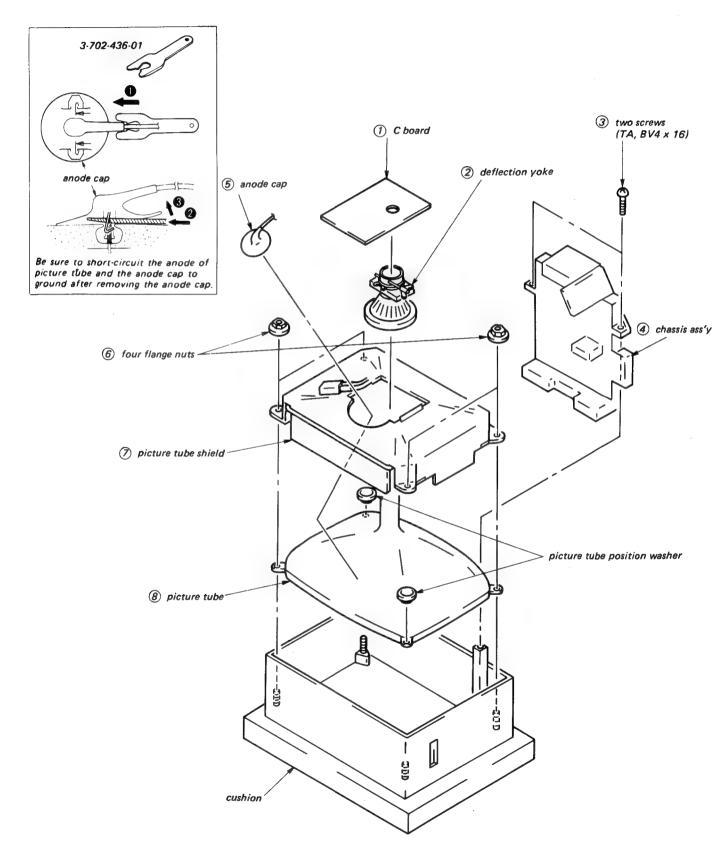
#### 2-3. CHECKING FOR A AND D BOARDS UP (2)



#### 2-4. BEZEL ASS'Y REMOVAL



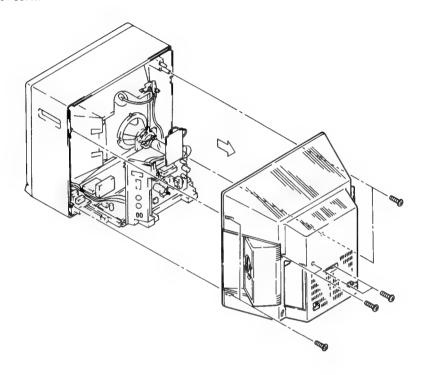
#### 2-5. PICTURE TUBE REMOVAL



#### 2-6. OPK-102 BOARD ATTACHING

Before installing OPK-102 unplug the set from the wall outlet. After the installation is completes, check that the TV operates properly.

#### 1. Remove the back cover.

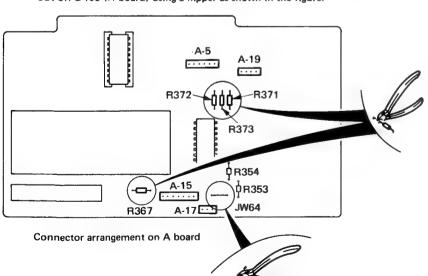


#### 2. A BOARD REMODELING

- Cut off R371, R372, R373 and R367 using a nipper as shown in the figure.
- Cut off the jumper (JW64) using a nipper as shown in the figure.
- Change the resistance value of R353 and R354 (R353 3.9K, R354 8.2K).
- Cut off D409 (H board) using a nipper as shown in the figure.

#### 3. OPK-102 change the resistance

 Change the resistance value of RV-3, R18 and R19. (RV-3 470K-B, R18 470K, R19 15K)



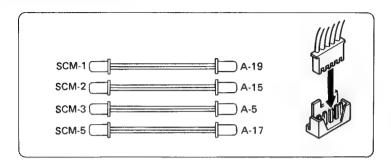


OPK-102 conductor side

-18-

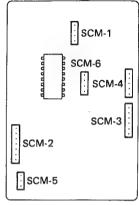
#### 4. CONNECTOR CONNECTING

Connect the other end of the harness connected to the OPK-102 board to each connector
on the A and C boards, respectively, as shown in the figure below.
 (Refer to the connector arrangement on the A, C and OPK-102 boards.)



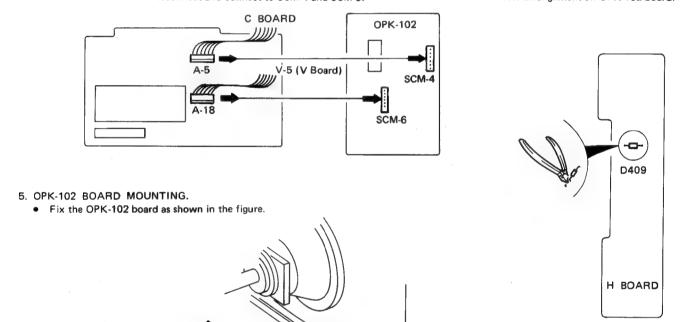
Connect the other end of the harness connected to the OPK-102 board to each connector
on the A and V boards, as shown in the figure below.

OPK-102 board



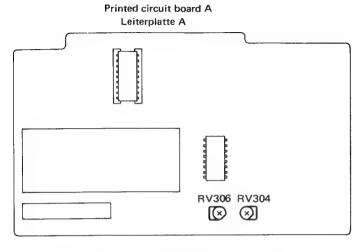
Disconnect and connect to SCM-4 and SCM-6.

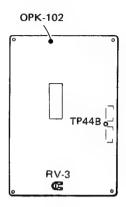
Connector arrangement on OPK-102 board.



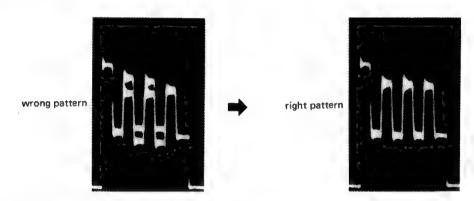
CRT SHIELD CASE

#### 2-7. ADJUSTMENT

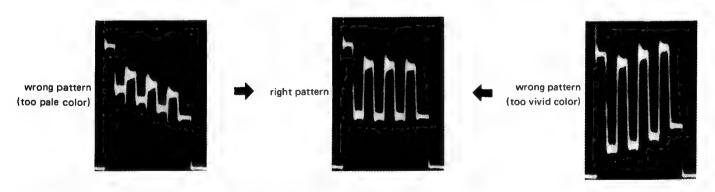




- 1. Plug the set to a wall outlet and turn on the power.
- 2. Connect the oscilloscope to the TP44B oscilloscope test pin on the OPK-102.
- 3. Select the SECAM color channel and adjust the color bar pattern (RV-3).



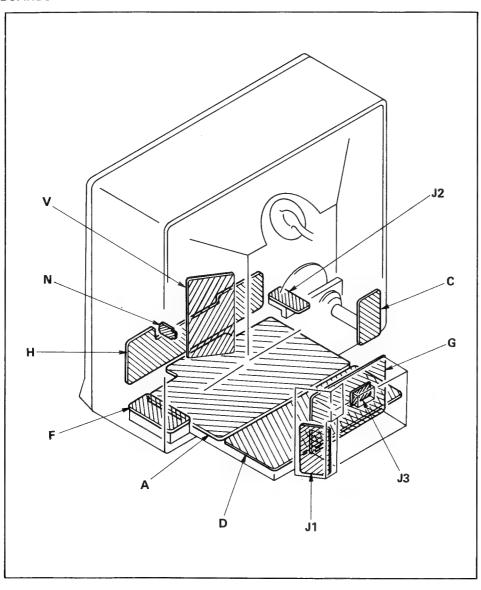
4. Select the PAL color channel and adjust the color bar pattern (RV-306).



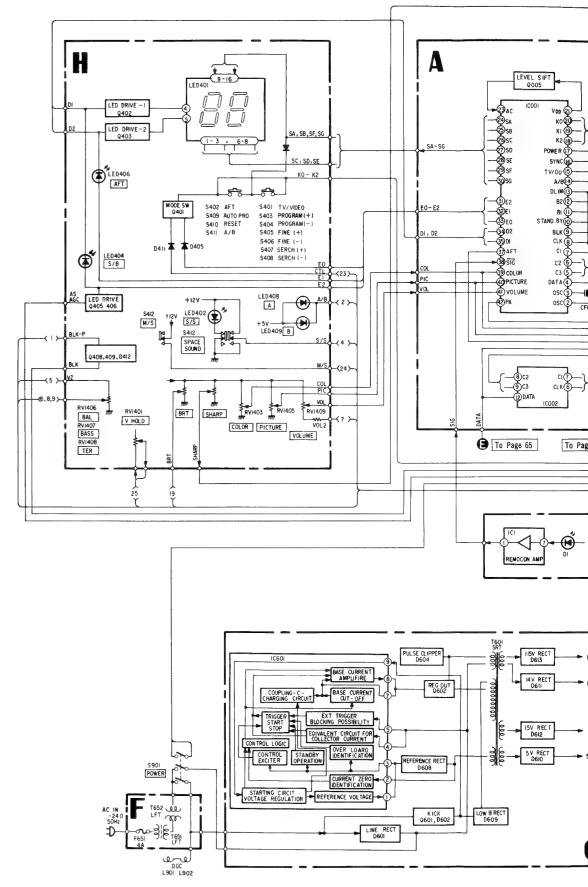
5. Attach the panels, etc. and adjust the 1 control and 2 control.

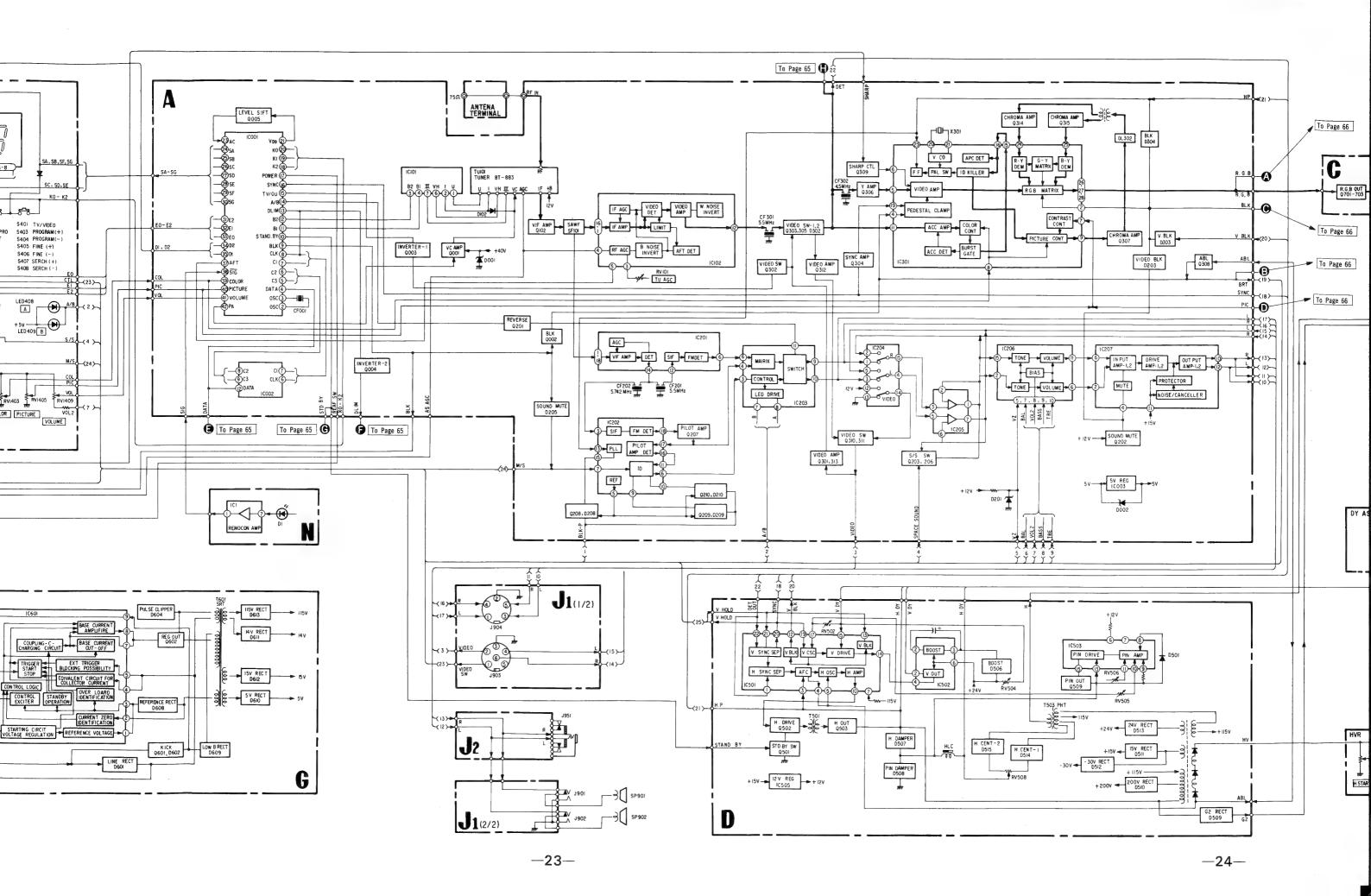
### SECTION 3 DIAGRAMS

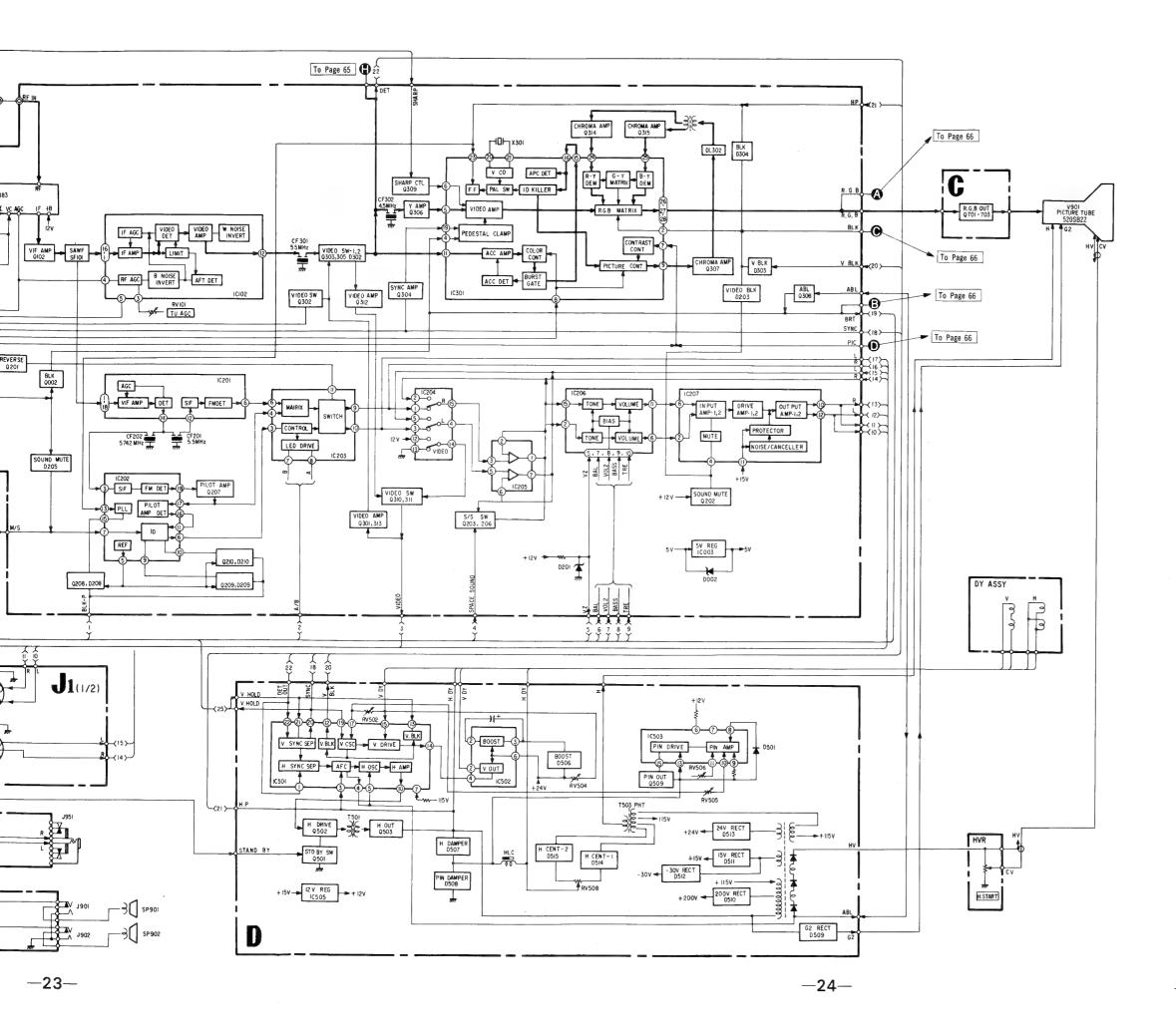
#### 3-1. CIRCUIT BOARDS LOCATION



#### 3-2. BLOCK DIAGRAM







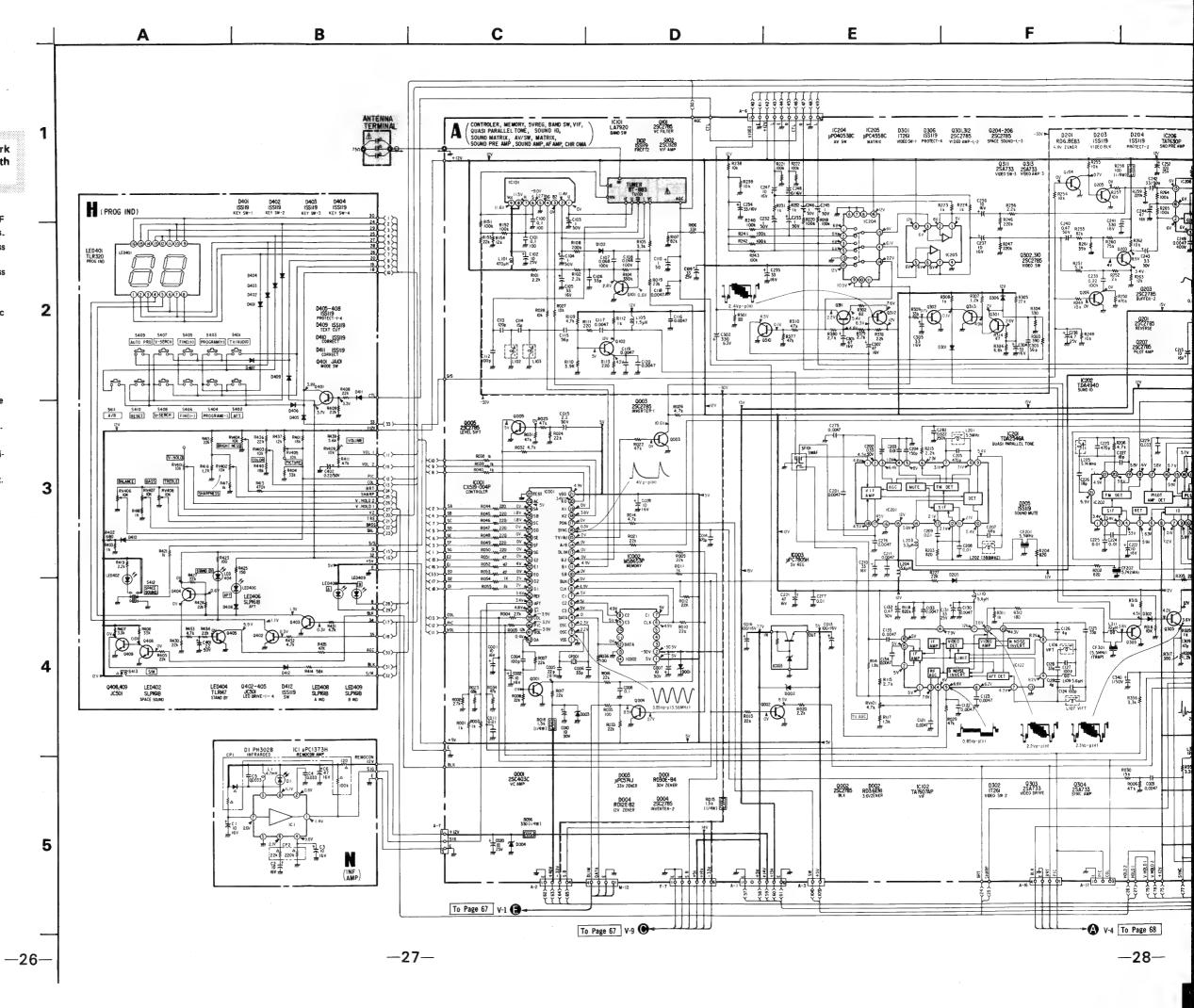
#### 3-3. SCHEMATIC DIAGRAM

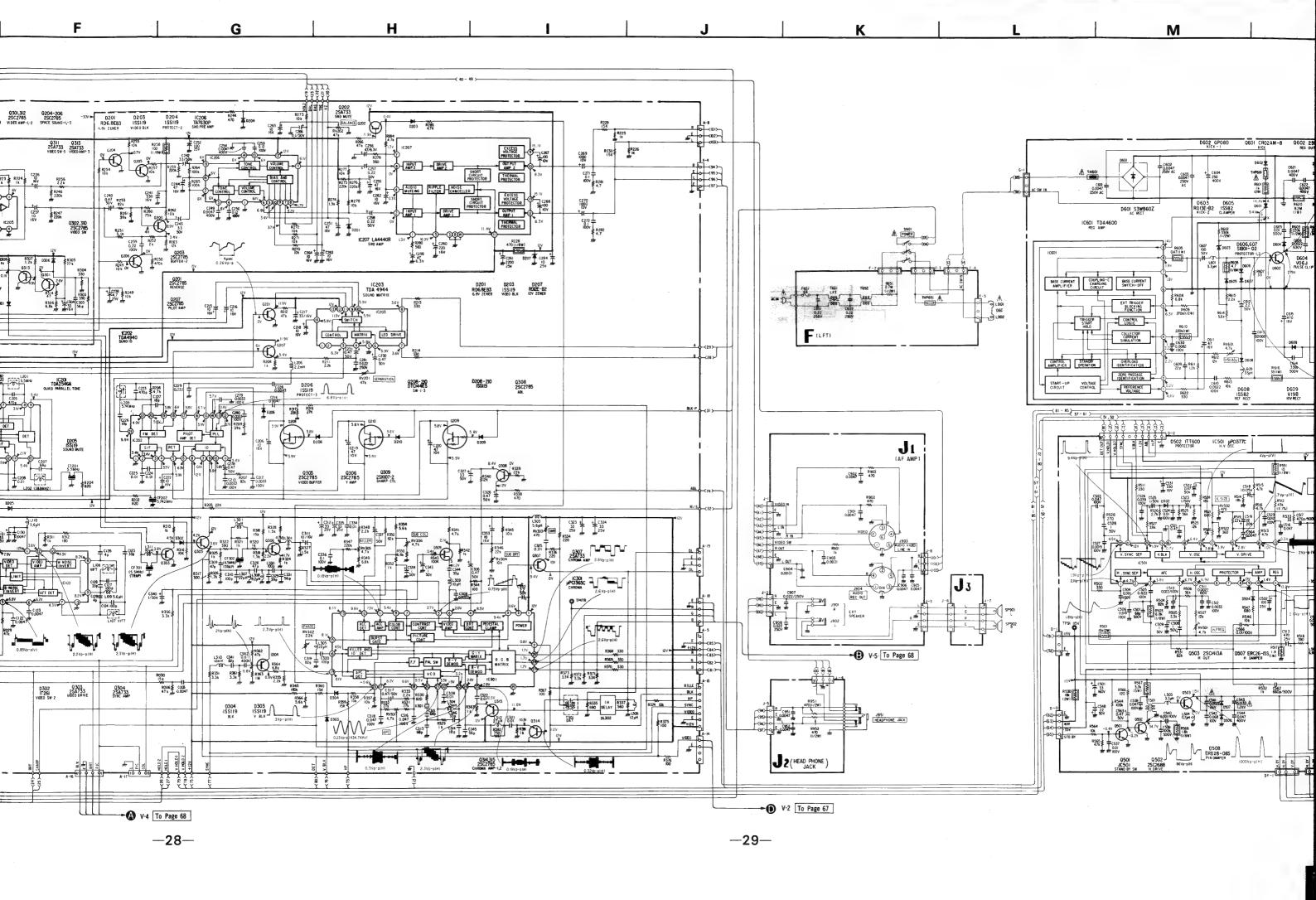
Note: The components identified by shading and mark

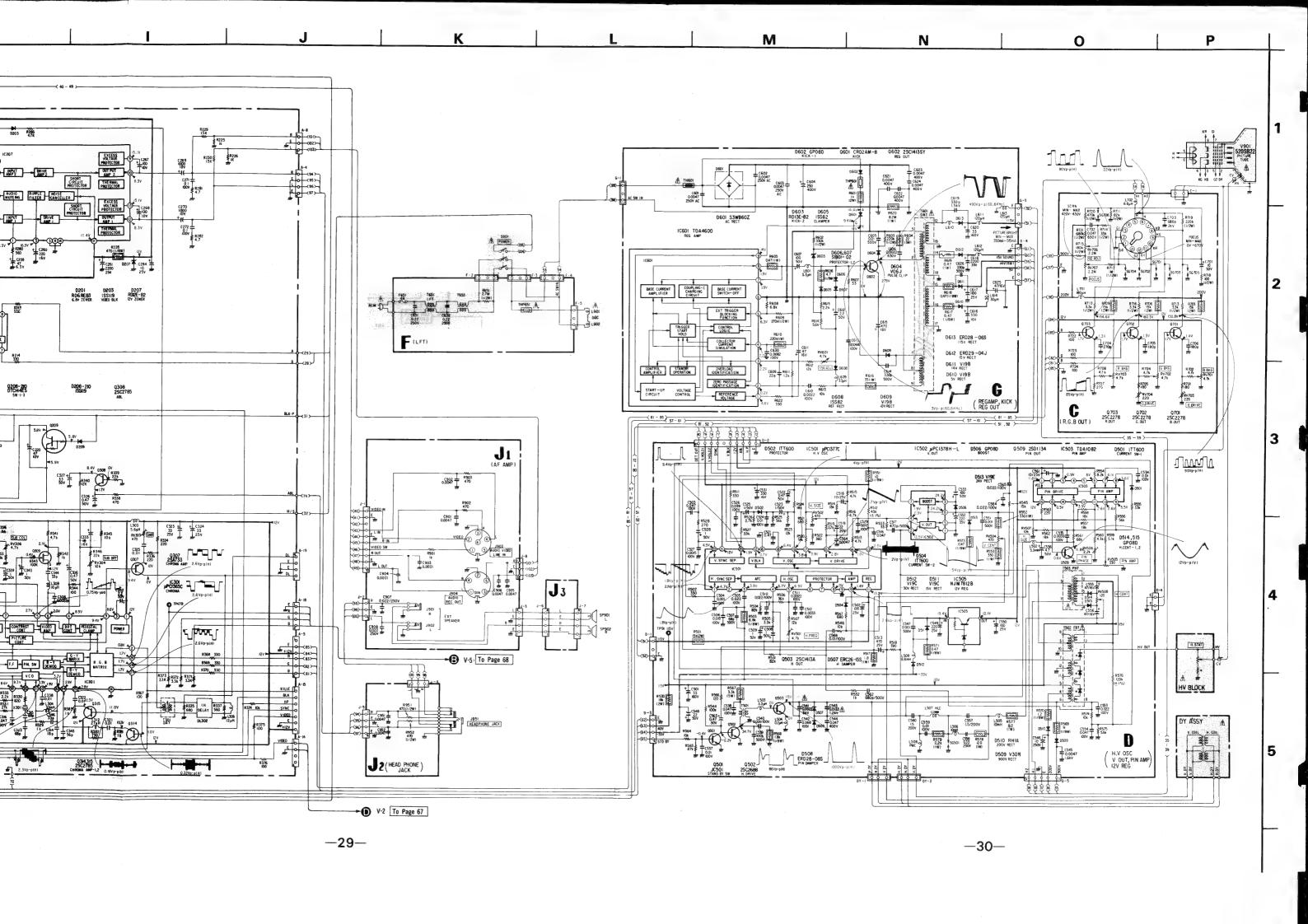
A are critical for safety. Replace only with
part number specified.

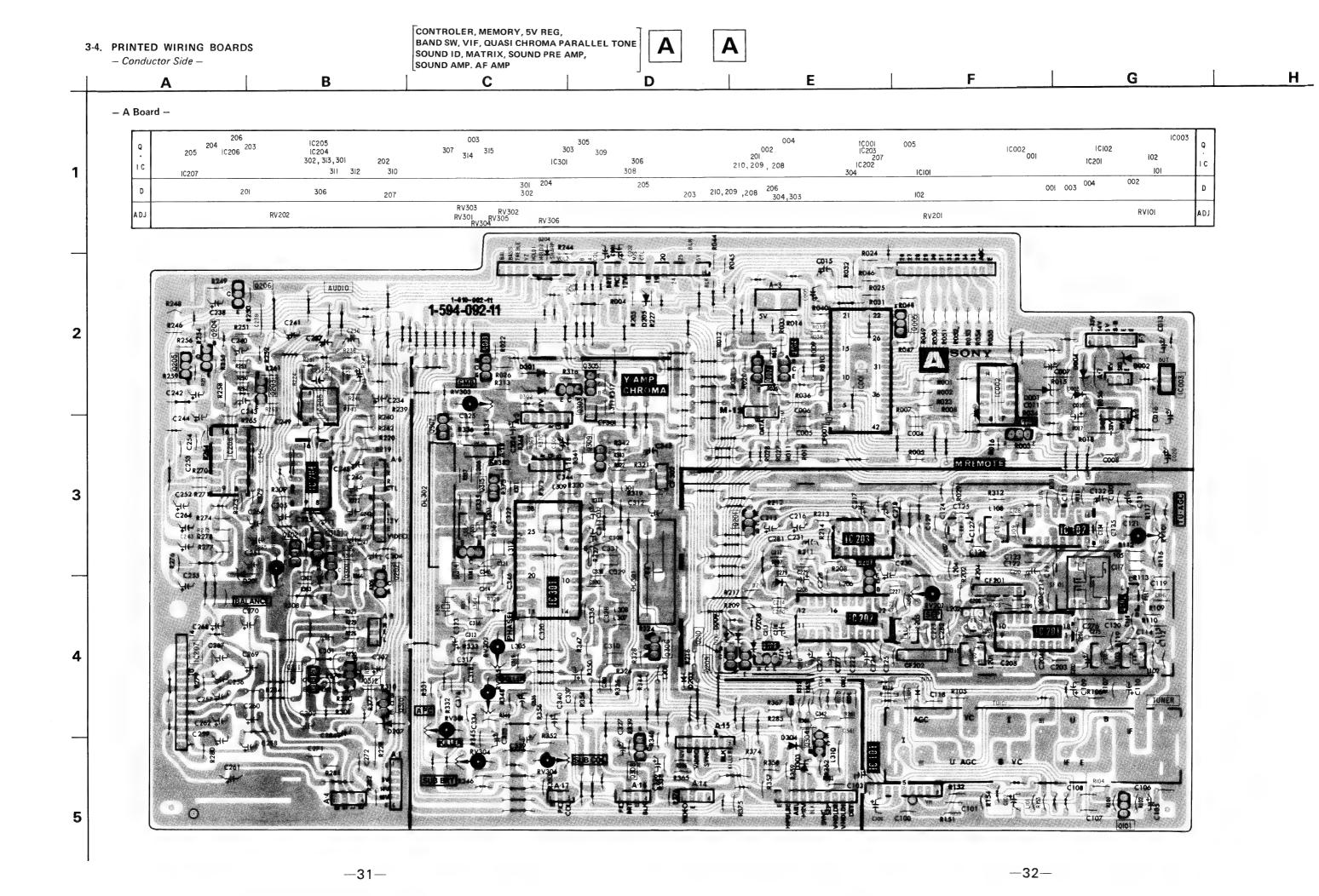
#### Note:

- All capacitors are in μF unless otherwise noted. p: μμF
   50WV or less are not indicated except for electrolytics.
- Resistors on the C, D, G boards are in ohms, ¼W unless otherwise noted.
- Resistors on the A, H, J1 boards are in ohms, 1/6W unless otherwise noted.
- $k\Omega:1000\Omega,M\Omega:1000k\Omega$
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- nonflammable resistor.
- fusible resistor.
- △ : internal component.
- panel designation.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- Readings are taken with a 10M-ohms-par-volt digital multimeter.
- Readings are taken with a PAL colour-bar signal input.
- adjustment for repair.
- ---: B+ bus.
- ——: B- bus.









H-V OSC, V OUT, PIN AMP, 12V REG

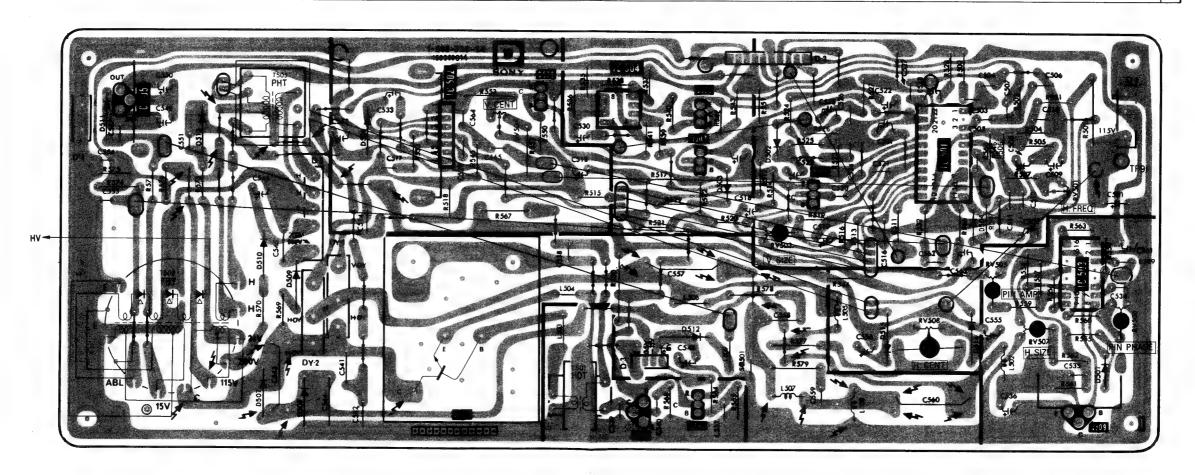
A B C D E F G

- D BOARD -

2

3

Q.	10505					IC502					IC50I			Q
1C						503	502	501				IC50 509		ic
D	511	513	510 507	509 508	506			512	502	515	504 514		501	D
ADJ						RV504			RV502		RV508 RV505	RV501	RV506	ADJ

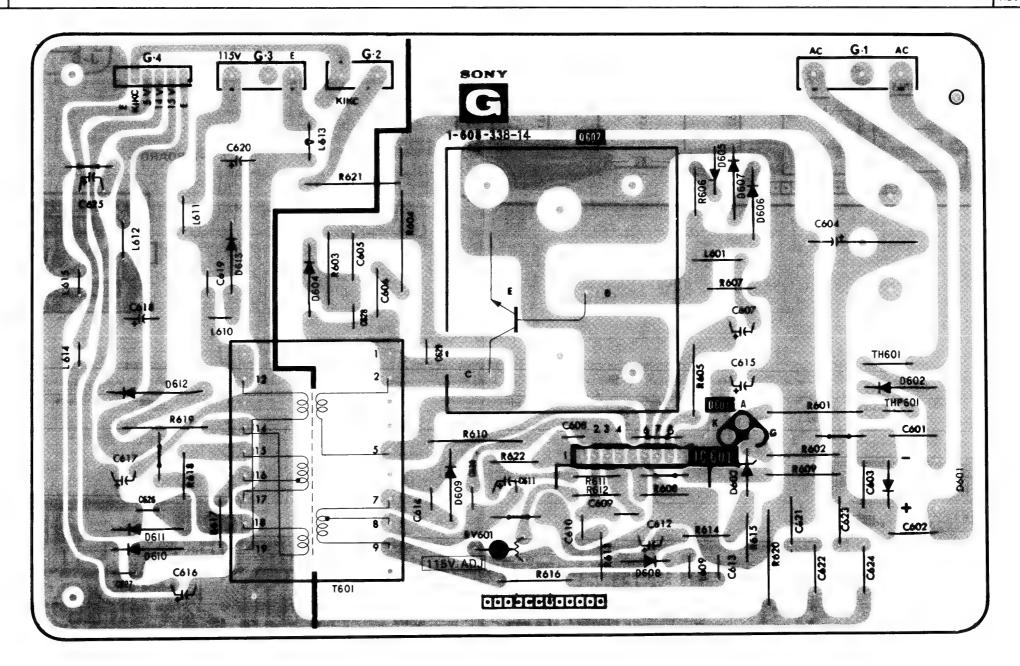


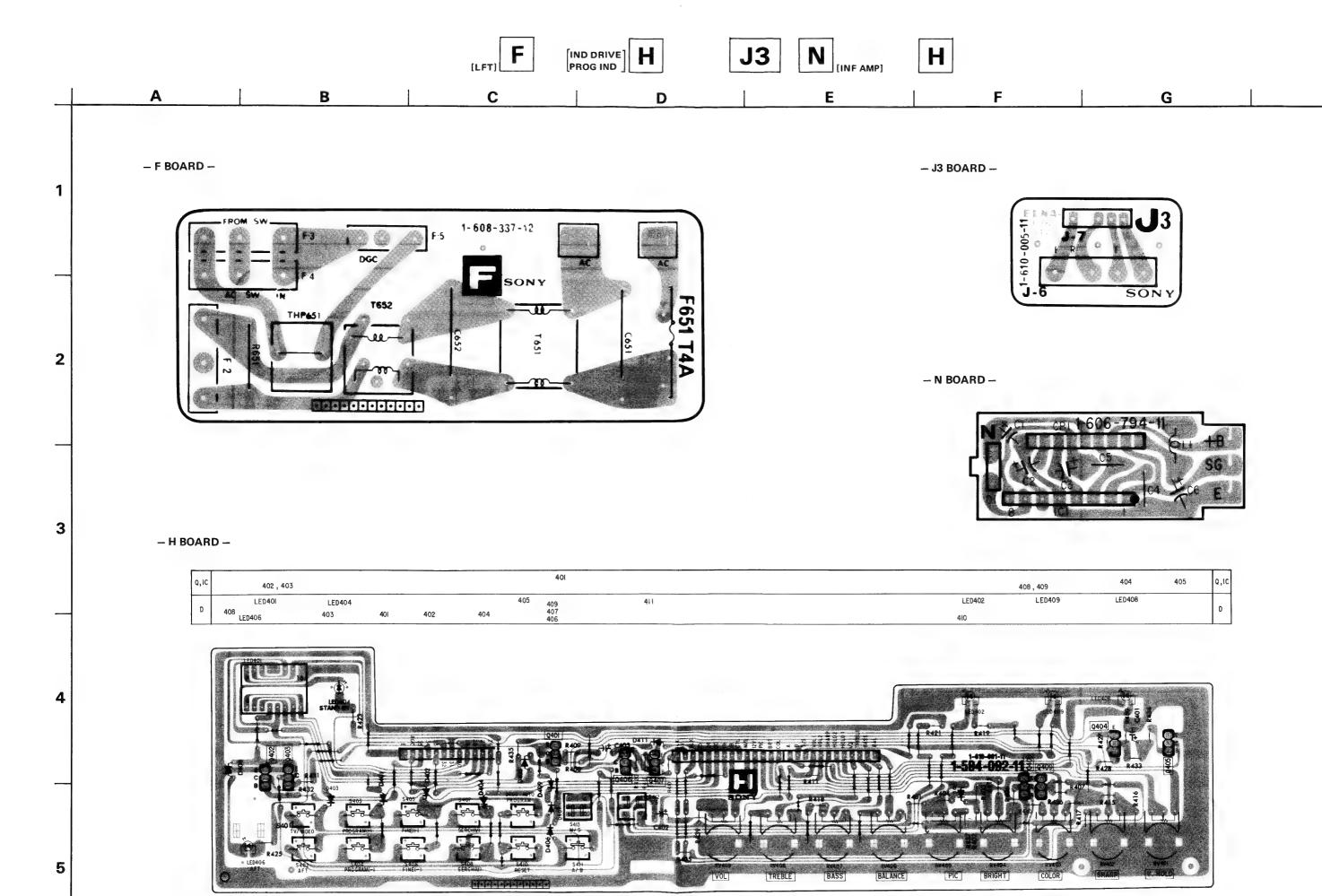


A B C D E F G H

- G BOARD -

IC,Q					602   1060	601		IC,Q
D	612 611 610	613	604	609	608	605,60 <b>7,</b> 60 <b>6</b> 603	602 60I	D
ADJ				RV60I				ADJ





**-37**-

-38-

Н

[AF AMP] J1

[HEAD PHONE JACK]

**J2** 

Δ

В

C

D

– J1 BOARD –

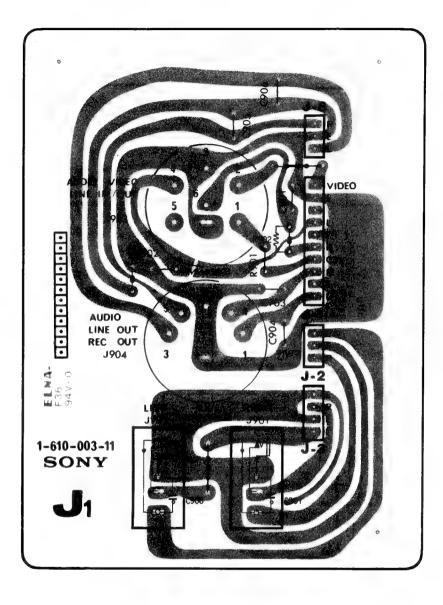
1

2

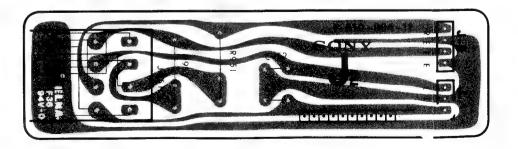
3

4

5



- J2 BOARD -





2

3

4

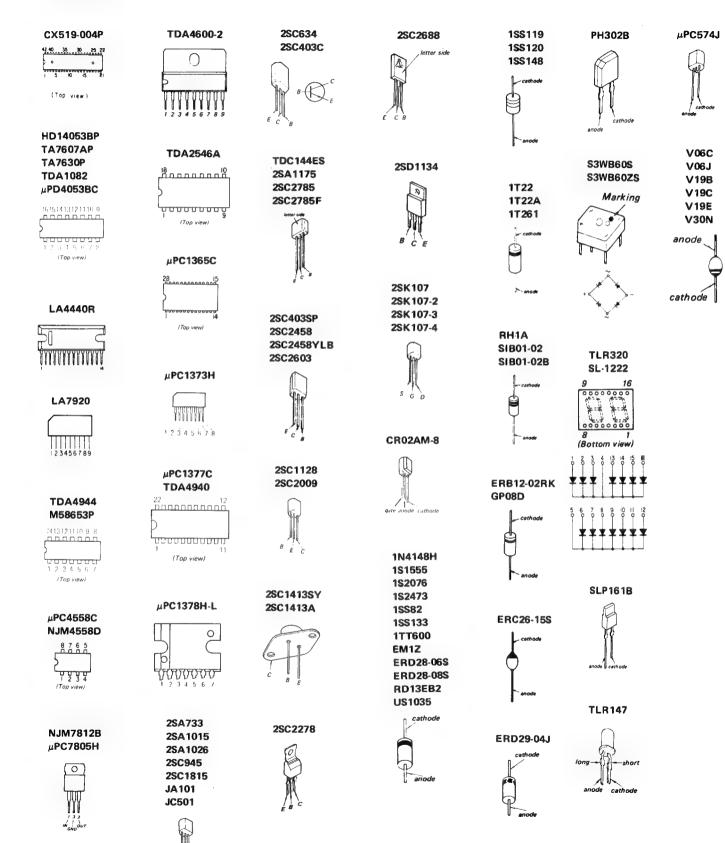
5

A B C D

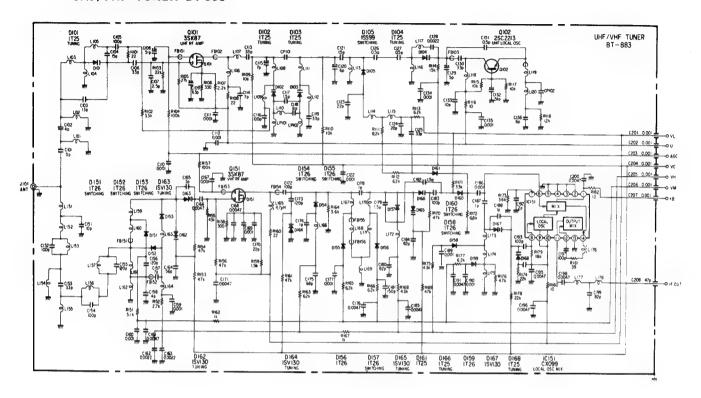
- C BOARD -

R709 G2. ADJ

#### 3-5. SEMICONDUCTORS



## 3-6. TUNER SCHEMATIC DIAGRAM -- UHF/VHF TUNER BT-883 --

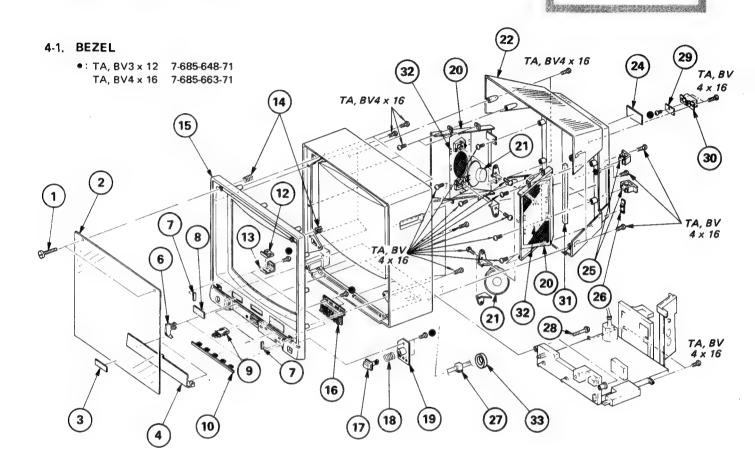


### SECTION 4 **EXPLODED VIEWS**

- · Items with no part number and no des-
- cription are not stocked because they are seldom required for routine service.

  The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

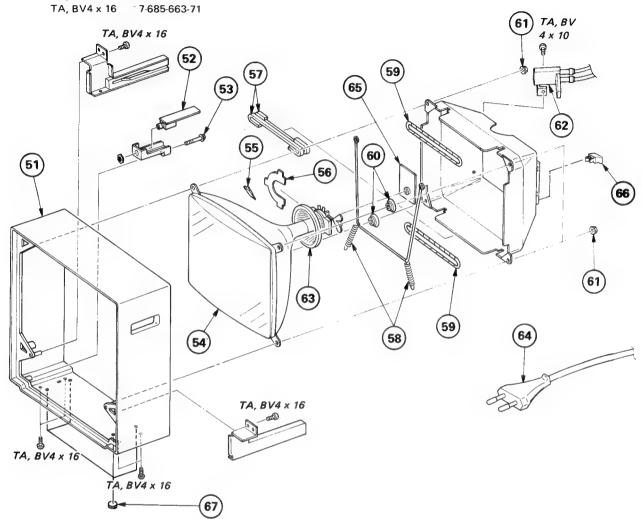
The components identified ne components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.



No.	Part No.	Description	Remark	No.	Part No.	<u>Description</u> <u>Remark</u>
1	4-336-851-11	SCREW, ORNAMENTAL		18	4-362-278-00	SPRING, COMPRESSION
2	4-366-806-00	FILTER, GLASS		19	<b>4:4-362-206-00</b>	HOLDER, POWER BUTTON
3	X-3701-084-0	EMBLEM (LARGE) ASSY, SONY		20	X-4362-203-2	PLATE ASSY, BAFFLE, SPEAKER
4	4-362-225-11	DOOR, CONTROL		21	1~503~194~00	SPEAKER
6	4-362-203-00			22	4-362-238-11	COVER, BACK
7	4-341-961-00	SHEET (S)		24	<b>1:</b> 4-364-503-00	LABEL, MODEL NUMBER
8	<b>♦:4~362~289~00</b>	PLATE, ORNAMENTAL, INDICATOR		25	4-316-003-00	HOLDER, CORD
9	4-352-034-00	CATCHER, PUSH		26	4-329-127-00	CLAMP, CORD
10	<b>4:4-362-218-00</b>	STRIP, ORNAMENTAL		27	A.4-022-115-01	HOLDER, AC CORD
12	4-336-808-00	PROTECTOR, FILTER		28	4-319-520-00	SCREW, SPECIAL (+PW4X30)
13	<b>♦:4~362~201~00</b>	HOLDER, FILTER		29	<b>♦:1-610-005-00</b>	J3 BOARD
14	4-357-414-00	NUT (M4X20)		30		COVER, TERMINAL, SPEAKER
15	X-4362-210-2	BEZEL ASSY	4 - 14	31	4-362-283-00	CUSHION
16	4-362-221-11	BUTTON, MULTI		32	4-858-753-00	SHEET, DAMPER
17	X-4362-201-0	BUTTON ASSY, POWER		33	1-543-179-00	RING, CORE

#### 4-2. CABINET

TA, BV4 x 10 7-685-646-71
TA, BV4 x 16 7-685-663-71

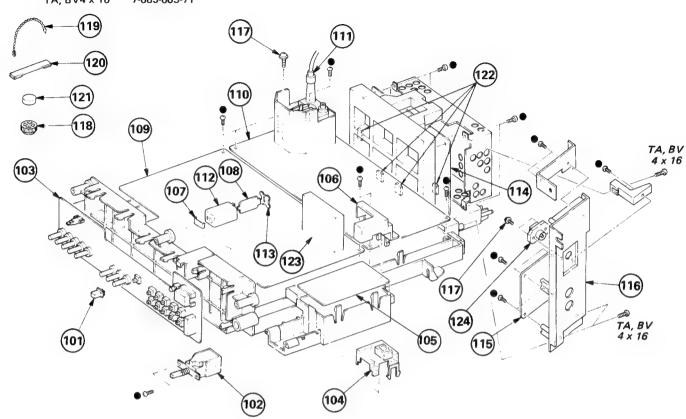


No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
55 56 57 58	A-8-738-704-05 3-703-003-00 1-452-146-00 4-312-539-00 4-303-774-XX	J2 BOARD SCREW, SPECIAL (+PW4X30) CRT 520SB22 SPACER, DY MAGNET, BMC CUSHION (A), BEZEL		63 64	4-306-034-00 ★.1-228-714-21 ★.1-451-204-31 ★.1-551-270-31 ♦:A-1330-451-A	WASHER, CRT POSITION FLANGE NUT, (B) 5MM RESISTOR ASSY, HIGH-VOLTAGE DEFLECTION YOKE CORD, POWER C BOARD, COMPLETE HOLDER, PC BOARD FOOT, F	

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

#### 4-3. CHASSIS

• : TA, BV3 x 12 7-685-648-71 TA, BV4 x 16 7-685-663-71



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
103 104 105 106 107 108 109 110	6:1-610-001-00 6:4-362-248-00 6:1-608-337-00 6:4-362-247-00 6:4-333-624-00 6:1-606-794-00 6:A-1295-769-A 6:A-1345-385-A	SWITCH, PUSH H BOARD COVER, POWER SWITCH F BOARD COVER, AC TERMINAL FILM (N), SPECIAL		113 114 115 116 117 118 119 120 121 122	6:4-342-118-00 6:A-1245-189-A 6:1-610-003-00 4-362-242-01 4-304-496-00 1-452-094-00 4-308-870-00 X-4309-608-0 1-452-032-00 4-858-753-00	CASE, SHIELD (MAIN), R LID, SHIELD CASE, R G BOARD, COMPLETE J1 BOARD PANEL, CONNECTOR HEAD, WASHER, TAPPING SCREW MAGNET, ROTATABLE DISK; 15MM Ø CLIP, LEAD WIRE PERMALLOY ASSY, CONVERGENCE MAGNET, DISK; 10MM Ø SHEET, DAMPER TUMER, ET (BT-883) TERMINAL BOARD ASSY, ANTENNA	

The components identified by shading and mark A are critical for safety. Replace only with part number specified.



### SECTION 5 ELECTRICAL PARTS LIST

D601

D611

NOTE:

Ref.No Part No.

The components identified by shading and mark <u>A</u> are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked " ♣ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

 All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Description

CAPACITORS ۰ MF : بربر , PF : بربر

RESISTORS · All resistors are in ohms

COILS · MMH : inH, UH : jiH

• F : nonflammable

4:1-608-337-00 F BOARD

#### CAPACITOR

C651 A.1-117-121-11 PAPER 0.22MF 20% 250V C652 A.1-117-121-11 PAPER 0.22MF 20% 250V

#### CONNECTOR

◆:1-506-348-XX 3P PLUG (L) •:1-506-348-XX 3P PLUG (L) •:1-506-348-XX 3P PLUG (L) •:1-508-765-00 3P PLUG (M) F3 F4

F651 A. 1-532-350-11 FUSE, TIME-LAG 4A 1-533-149-00 HOLDER, FUSE, F651

#### RESISTOR

R651 A.1-202-724-51 SOLID 2.7M 10% 1/2W

#### TRANSFORMER

T651 A. 1-421-352-11 TRANSFORMER, FERRITE T652 A. 1-421-592-00 TRANSFORMER, FERRITE

#### THERMISTOR

THP65141-806-165-11 THERMISTOR (POSITIVE)

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#### CAPACITOR

1-161-964-00 CERAMIC 0.0047MF

C601

C602	1-161-964-00	CERAMIC	0.0047MF		250V
C603	1-161-964-00	CERAMIC	0.0047MF		250V
C604	1-125-167-00	ELECT (BLOCK)	250MF		400V
C605	1-102-050-00	CERAMIC	0.01MF		500V
C606	1-129-706-00	FILM	0.0022MF	10%	630V
C607	1-124-025-00	ELECT	100MF	20%	16V
C609	1-102-959-00	CERAMIC	22PF	5%	50V
C611	1-124-025-00	ELECT	100μF	20%	16V
C612	1-123-353-00	ELECT	2.2MF	20%	50V
C613	1-108-375-00	MYLAR	0.0068MF	10%	100V
C614	1-102-030-00	CERAMIC	330PF	10%	500V
C615	1-123-323-00	ELECT	470MF	20%	16V
C616	1-123-322-00	ELECT	330MF	20%	16V
C617 C618 C619 C620 C621	1-123-333-00 1-123-350-00 1-102-327-00 1-123-024-00 1-161-738-00	ELECT ELECT CERAMIC ELECT CERAMIC	100MF 2200MF 330PF 33MF 0.0047MF	20% 20% 15% 20%	25V 35V 1.5KV 160V 400V

Remark	Ref.No	Part No.	Description			Remark
250V	C622 C623 C624 C625 C626	1-161-738-00 1-161-738-00 1-161-738-00 1-123-332-00 1-102-030-00	CERAMIC CERAMIC CERAMIC ELECT CERAMIC	0.0047MF 0.0047MF 0.0047MF 47MF 330PF	20% 20% 20% 20% 10%	400V 400V 400V 16V 500V
250V	C630	1-108-376-00	MYLAR	0.0082MF	10%	100V

#### DIODE

8-719-503-06 DIODE S3WB60Z 8-719-300-45 DIODE EM1Z D602 D603 8-719-100-68 DIODE RD13E-B2 8-719-901-39 DIODE VO6J 8-719-901-83 DIODE 1SS83 D604 D605 8-719-200-02 8-719-200-02 D606 DIODE 10E2 D607 DIODE 10E2 DIODE 15583 DIODE V19E D608 8-719-901-83 D609 8-719-901-93 D610 8-719-901-93 DIODE V19E

#### 8-719-901-93 DIODE V19E 8-719-900-26 DIODE ERD29-08J 8-719-928-08 DIODE ERD28-08 D612 D613

#### CONNECTOR

**a**:1-506-348-XX 3P PLUG (L) **a**:1-508-765-00 3P PLUG (M) G3

4:1-560-126-00 PLUG, CONNECTOR (2.5MM) 6P

IC601 8-759-046-00 IC TDA4600 •:4-356-301-00 HEAT SINK (D), IC601

#### COIL

1-408-225-00 MICRO INDUCTOR 3.3UH 1-408-415-00 MICRO INDUCTOR 33UH 1-425-613-00 COIL, AIR-CORE, QF TYPE 1-459-215-00 CORE COIL 120UH 1-459-215-00 CORE COIL 120UH L609 L610 L611 1612 1-459-215-00 CORE COIL 120UH 1-459-407-00 COIL, FERRITE CHOKE 30UH 1613 L614

#### TRANSISTOR

8-719-000-28 THYRISTOR CRO2AM-8
8-729-300-60 TRANSISTOR 2SC1413-SY
3-701-609-00 BUSHING (B), TR, Q602
4:4-314-938-01 RETAINER (T0-3), TRANSISTOR, Q602 0602 4:4-329-407-00 LUG, GROUND, Q602 **♦:4-336-010-00** HEAT SINK, Q602 **♦:4-362-210-00** SHEET (T0-3), Q602

#### RESISTOR

1-206-664-00 METAL OXIDE 1-244-933-00 CARBON 1K 5% 330K 5% 2W F 1/2W

250V

Ref.No Part No.	Description				Dament						
					Remark	Ref.N	lo Part No.	Description			Remark
R603 1-244-929-00 R604 1-206-519-00 R605 1-212-356-00 1-543-194-00	METAL OXIDE	220K 22 0.47	5% 5% 5%	1/2W 3W 1W	F F		<b>♦:1-560-124-00</b> <b>♦:1-560-124-00</b>	PLUG, CONNEC			
R606 1-246-981-00	C ARBON	4.7	5%	1/8W	F			ACITOR			
R607 1-247-095-00 R608 1-215-172-00 R609 1-244-931-00 R610 1-215-811-00 R611 1-215-154-00	C ARBON ME TAL	33 6.8K 270K 220K 1.2K	5% 5% 5%	1/4W 1/4W 1/2W 1W 1/4W		C001 C002 C003 C004 C005	1-123-356-00 1-123-356-00 1-102-125-00 1-102-973-00 1-102-959-00	ELECT CERAMIC CERAMIC	10MF 10MF 0.0047MF 100PF 22PF	20% 20% 10% 5% 5%	16V 16V 50V 50V 50V
R612 1-215-178-00	ME TAL	12K	5%	1/4W		C006	1-102-963-00		33PF	5%	50V
R613 1-215-176-00 R614 1-215-170-00 R615 1-215-160-00 R616 1-213-125-00 R617 1-247-636-00	METAL METAL METAL OXIDE	10K 5.6K 2.2K 33 0.47	5% 5% 5% 5%	1/4W 1/4W 1/4W 1W 1/8W	F	C007 C008 C009 C010	1-123-356-00 1-108-251-00 1-123-356-00 1-123-356-00	MYLAR ELECT ELECT	10MF 0.1MF 10MF 10MF	20% 5% 20% 20%	50V 50V 16V 50V
R618 1-247-636-00 R619 1-217-465-00	CARBON FUSIBLE CARBON	0.47 0.47 0.47 8.2M 330	5% 5% 5% 5%		F F	C011 C013 C014 C015 C016	1-101-004-00 1-123-333-00 1-102-114-00 1-123-353-00 1-123-333-00	ELECT CERAMIC ELECT	0.01MF 100MF 470PF 2.2MF 100MF	20% 10% 20% 20%	50V 16V 50V 50V 16V
	RIABLE RESISTOR	1		·		C020 C100 C101 C102 C103	1-123-356-00 1-110-175-00 1-110-175-00 1-123-356-00 1-123-380-00	MYLAR MYLAR ELECT	10MF 0.1MF 0.1MF 10MF 1MF	20% 10% 10% 20% 20%	25V 100V 100V 25V 50V
	NSFORMER					C104	1-123-380-00	FLECT	1MF	20%	50V
7601 Л. 1-421-560-12 <u>THE</u>	TRANSFORMER,	FERRIT	E (SRI	<b>D</b> yloge f		C105 C106 C107 C108	1-123-318-00 1-102-963-00 1-110-173-00 1-110-173-00	ELECT CERAMIC MYLAR	33MF 33PF 0.068MF 0.068MF	20% 5% 10% 10%	16V 50V 100V 100V
TH601 A. 1-800-820-1 THP601 A. 1-806-449-2 ************************************	1 THERMISTOR	(POSIT	IVE)	*****	*****	C109	1-123-343-00 1-123-380-00	ELECT ELECT CERAMIC CERAMIC	33MF 1MF 100PF 120PF 15PF	20% 20% 5% 5%	25V 50V 50V 50V 50V
<b>1.</b> 1-555-706-00 <b>1.</b> 4-362-292-00 <b>1.</b> 4-362-293-00 <b>1.</b> 4-362-294-00	LID, UPPER, S CASE (MAIN).	HIELD (	CASE, VIF	VIF		C115 C116 C117 C118 C119	1-102-523-00 1-102-125-00 1-102-125-00 1-102-125-00 1-102-125-00	CERAMIC CERAMIC CERAMIC	56PF 0.0047MF 0.0047MF 0.0047MF 0.0047MF	5% 10% 10% 10% 10%	50V 50V 50V 50V 50V
CON	NECTOR					C120	1-102-125-00		0.0047MF	10%	50V
A1	PLUG, CONNECT 2P PLUG (M) PLUG, CONNECT	OR (2.	5MM) 4 5MM) 4	IP IP		C121 C122 C123 C124	1-102-125-00 1-102-125-00 1-102-125-00 1-102-529-00	CERAMIC CERAMIC	0.0047MF 0.0047MF 0.0047MF 100PF	10% 10% 10% 5%	50V 50V 50V 50V
A5	PLUG, CONNECT PLUG, CONNECT	OR (2.) OR (2.) OR (2.)	5MM) 6 5MM) 1 5MM) 3	SP .OP SP		C125 C126 C127 C128 C129	1-102-518-00 1-102-937-00 1-102-529-00 1-102-518-00 1-102-937-00	CERAMIC CERAMIC CERAMIC	33PF 4PF 100PF 33PF 4PF	5% 0.25PF 5% 5% 0.25PF	50V 50V
A14 \$:1-560-124-00  A15 \$:1-560-127-00  A16 \$:1-560-124-00  A17 \$:1-560-123-00	PLUG, CONNECT PLUG, CONNECT PLUG, CONNECT	OR (2.1	5MM PI 5MM PI	TCH)		C130 C131 C132 C133	1-102-125-00 1-123-343-00 1-123-379-00 1-102-125-00	ELECT ELECT	0.0047MF 33MF 0.47MF 0.0047MF	10% 20% 20% 10%	50V 25V 50V 50V

NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.



Ref.No Part No.	Description			Remark	Ref.N	o Part No.	Description			Remark
C134 1-102-125-00 C135 1-102-125-00 C201 1-102-125-00 C202 1-123-286-00 C203 1-101-004-00	CERAMIC CERAMIC ELECT	0.0047MF 0.0047MF 0.0047MF 0.33MF 0.01MF	10% 10% 10% 20%	50V 50V 50V 50V 50V	C252 C253 C254 C255 C256	1-123-333-00 1-110-176-81 1-110-186-00 1-123-332-00 1-123-306-00	ELECT MYLAR MYLAR ELECT ELECT	100MF 0.12MF 0.0047MF 47MF 47MF	20% 10% 10% 20% 20%	25V 100V 400V 16V 6.3V
C204 1-101-361-00 C205 1-130-014-00 C206 1-123-356-00 C207 1-102-525-00 C208 1-101-004-00	FILM ELECT CERAMIC	150PF 470PF 10MF 68PF 0.01MF	5% 5% 20% 5%	50V 50V 16V 50V 50V	C257 C258 C259 C260 C261	1-123-447-00 1-123-447-00 1-123-306-00 1-123-321-00 1-123-338-00	ELECT ELECT ELECT ELECT ELECT	0.22MF 0.22MF 47MF 220MF 2200MF	20% 20% 20% 20% 20%	50V 50V 6.3V 16V 25V
C209 1-101-004-00 C210 1-123-318-00 C211 1-102-125-00 C212 1-108-371-00 C213 1-108-371-00	ELECT CERAMIC MYLAR	0.01MF 33MF 0.0047MF 0.0033MF 0.0033MF	20% 10% 10% 10%	50V 16V 50V 100V 100V	C262 C263 C264 C265 C266	1-123-356-00 1-123-356-00 1-123-356-00 1-123-356-00 1-123-586-00	ELECT ELECT ELECT ELECT ELECT	10MF 10MF 10MF 10MF 0.1MF	20% 20% 20% 20% 20%	16V 16V 16V 16V 50V
C214 1-102-125-00 C215 1-123-356-00 C216 1-123-356-00 C217 1-123-318-00 C218 1-123-356-00	ELECT ELECT ELECT	0.0047MF 10MF 10MF 33MF 10MF	10% 20% 20% 20% 20%	50V 16V 16V 16V 16V	C267 C268 C269 C270 C271	1-123-307-00 1-123-307-00 1-123-311-00 1-123-311-00 1-110-175-00	ELECT ELECT ELECT MYLAR	100MF 100MF 1000MF 1000MF 0.1MF	20% 20% 20% 20% 10%	10V 10V 10V 10V 100V
C219 1-123-306-00 C220 1-123-306-00 C221 1-123-332-00 C222 1-123-356-00 C223 1-130-014-00	ELECT ELECT ELECT	47MF 47MF 47MF 10MF 470PF	20% 20% 20% 20% 5%	10V 10V 16V 16V 50V	C272 C275 C276 C277 C278	1-110-175-00 1-102-125-00 1-102-125-00 1-101-004-00 1-123-379-00	MYLAR CERAMIC CERAMIC CERAMIC ELECT	0.1MF 0.0047MF 0.0047MF 0.01MF 0.47MF	10% 10% 10%	100V 50V 50V 50V 50V
C224 1-101-004-00 C225 1-101-004-00 C226 1-102-513-00 C227 1-102-513-00 C228 1-108-570-00	CERAMIC CERAMIC CERAMIC	0.01MF 0.01MF 18PF 18PF 0.0043MF	5% 5% 5%	50V 50V 50V 50V 50V	C279 C280 C281 C282 C283 C284	1-108-371-00 1-108-371-00 1-110-182-00 1-110-182-00 1-123-316-00 1-123-356-00	MYLAR MYLAR MYLAR MYLAR ELECT ELECT	0.0033MF 0.0033MF 0.022MF 0.022MF 10µF 10MF	10% 10% 10% 10% 20%	100V 100V 250V 250V 16V 25V
C229 1-130-626-00 C230 1-123-379-00 C231 1-123-379-00 C232 1-123-380-00 C233 1-123-380-00	ELECT ELECT ELECT	0.033MF 0.47MF 0.47MF 1MF 1MF	5% 20% 20% 20% 20%	50V 50V 50V 50V 50V	C301 C302 C303 C304 C305	1-123-332-00 1-123-297-00 1-101-884-00 1-123-318-00 1-123-318-00	ELECT ELECT CERAMIC ELECT ELECT	47MF 330MF 56PF 33MF 33MF	20% 20% 5% 20% 20%	16V 6.3V 50V 16V 16V
C234 1-123-318-00 C235 1-123-318-00 C236 1-123-356-00 C237 1-123-356-00 C238 1-123-328-00	ELECT ELECT ELECT	33MF 33MF 10MF 10MF 4.7MF	20% 20% 20% 20% 20%	16V 16V 16V 16V 25V	C306 C307 C308 C309 C310	1-123-379-00 1-123-332-00 1-102-959-00 1-101-880-00 1-102-678-00	ELECT ELECT CERAMIC CERAMIC CERAMIC	0.47MF 47MF 22PF 47PF 100PF	20% 20% 5% 5% 5%	50V 16V 50V 50V 50V
C239 1-108-393-00 C240 1-123-379-00 C241 1-123-322-00 C242 1-123-354-00 C243 1-123-354-00	ELECT ELECT ELECT	0.22MF 0.47MF 330MF 3.3MF 3.3MF	10% 20% 20% 20% 20%	100V 50V 16V 50V 50V	C311 C312 C313 C314 C315	1-123-356-00 1-123-343-00 1-101-888-00 1-102-953-00 1-102-525-00	CERAMIC	10MF 33MF 68PF 18PF 68PF	20% 20% 5% 5% 5%	16V 25V 50V 50V 50V
C244 1-123-332-00 C245 1-123-380-00 C246 1-123-380-00 C247 1-123-356-00 C248 1-123-356-00	ELECT ELECT ELECT	47MF 1MF 1MF 10MF 10MF	20% 20% 20% 20% 20%	16V 50V 50V 16V 16V	C316 C317 C318 C319 C320	1-110-171-00 1-123-379-00 1-110-171-00 1-102-971-00 1-102-973-00	ELECT MYLAR CERAMIC	0.047MF 0.47MF 0.047MF 82PF 100PF	10% 20% 10% 5% 5%	100V 50V 100V 50V 50V
C249 1-110-186-00 C250 1-110-176-00 C251 1-123-332-00	MYLAR	0.0047MF 0.12MF 47MF	10% 10% 20%	400V 100V 16V	C321 C322 C323	1-101-004-00 1-101-004-00 1-123-343-00	CERAMIC	0.01MF 0.01MF 33MF	20%	50V 50V 25V



Ref.No	Part No.	Description			Remark	Ref.No	Part No.	Description		Remark
C324 C325	1-123-343-00 1-101-004-00		33MF	20%	25V 50V		DEL	AY LINE		
C326	1-123-379-00	ELECT	0.01MF 0.47MF	20%	50V		1-415-330-00			
C327 C328	1-123-354-00 1-102-887-00		3.3MF 47PF	20% 5%	50V 50V	DL302		DELAY LINE (1H	)	
C329	1-102-889-00		39PF	5%	50V	_		NECTOR		
C331	1-102-678-00 1-102-850-00	CERAMIC	100PF 56PF	5% 5%	50V 50V	F7 <b>(</b>		PLUG, CONNECTO	R (2.5MM PITCH)	
C332 C333	1-123-353-00 1-131-371-00		2.2MF 10MF	20% 20%	50V 16V		īC			
C334	1-101-004-00	CERAMIC	0.01MF		50V		8-759-600-63 8-759-600-66	IC CX519-004P IC M58653P		
C335 C336	1-123-343-00 1-110-175-00		33MF 0.1MF	20% 10%	25V 100V		8-759-171-05 8-759-800-12			
C337 C338	1-123-380-00 1-101-004-00	ELECT	1MF 0.01MF	20%	50V 50V		8-759-276-07			
C339	1-123-380-00		1MF	20%	50V		6-066-719-40 8-759-007-54	IC TDA2546 IC TDA4940		
C340 C341	1-123-380-00	ELECT	1MF	20%	50V 50V	IC203	8-759-007-55	IC TDA4944		
C342	1-102-971-00 1-110-190-00	MYLAR	82PF 0.01MF	5% 10%	400V		8-759-140-53 8-759-145-58			
C343	1-123-380-00		1MF	20%	50V		8-759-276-30			
C344 C345	1-102-963-00 1-101-884-00	CERAMIC	33PF 56PF	5% 5%	50V 50V		8-759-800-15 8-759-113-65			
C346	1-102-963-00	CERAMIC	33PF	5%	50V		<u>C01</u>	<u>L</u>		
	FIL	TER				L101		MICRO INDUCTOR	470UH	
	1-527-790-00 1-527-840-00					L102 L103	1-404-476-00 1-404-476-00			
CF202	1-527-839-00 1-404-134-00	FILTER, CERA	MIC			L105 L107		MICRÓ INDUCTOR	1.5UH	
	1-409-332-00					L108	1-404-427-00			
	DIO	DE				L109	1-408-600-00	MICRO INDUCTOR		
D001		DIODE RD30E-				L110 L201	1-404-477-00		5.00n	
D002 D003	8-719-102-58 8-759-157-40	IC UPC574J				L202	1-404-476-00	•	S 3	
D004 D102	8-719-100-65	DIODE RD12E~ DIODE 1SS119				L203 L204		MICRO INDUCTOR		
D201	8-719-100-42	DIODE RD6.8E	-B3			L205 L206	1-404-477-00 1-408-947-00	COIL, IF MICRO INDUCTOR	2.2MMH	
D2O2 D2O3	8-719-911-19 8-719-911-19	DIODE ISS119 DIODE ISS119				L301		MICRO INDUCTOR		
D2 04	8-719-911-19	DIODE 188119				L303 L304	1~408~600~00	MICRO INDUCTOR MICRO INDUCTOR		
D2 05 D2 06	8-719-911-19 8-719-911-19	DIODE 188119 DIODE 188119				L305	1-408-607-00	MICRO INDUCTOR	22UH	
D2 07	8-719-100-65	DIODE RD12E~	B2			L306 L307	1-408-602-00 1-408-607-00	MICRO INDUCTOR MICRO INDUCTOR		
D2 08 D2 09	8-719-911-19 8-719-911-19					L308		MICRO INDUCTOR		
D2 10 D3 01	8-719-911-19 8-719-026-11	DIODE 188119				L309 L310		MICRO INDUCTOR MICRO INDUCTOR		
D3 02	8-719-026-11					L311 L312	1-408-603-00	MICRO INDUCTOR MICRO INDUCTOR	10UH	
D3 03 D3 04	8-719-911-19	DIODE 1SS119						NECTOR	2,011	
D3 04 D3 06	8-719-911-19 8-719-911-19				İ	M12 4		<del></del>	/2 SMM DITCH	
						MTC 6	11~30U~124~UU	PLUG, CONNECTOR	(2.5mm PIUN)	

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Ref.No Part No.	Description		Remark	Ref.No	Part No.	Description				Remark
<del>_</del>	ANSISTOR  TRANSISTOR 2SC4035F TRANSISTOR 2SC2458 TRANSISTOR 2SC2458 TRANSISTOR 2SC2458	,		R018 R019 R020 R021 R022	1-247-663-00 1-247-863-00 1-247-839-00 1-247-863-00 1-247-871-00	C ARBON C ARBON C ARBON	1.5K 22K 2.2K 22K 47K	5% 5% 5% 5%	1/4W 1/6W 1/6W 1/6W 1/6W	F
Q005 8-729-245-83 Q101 8-729-245-83 Q102 8-765-300-00 Q201 8-729-245-83 Q202 8-729-117-54	TRANSISTOR 2SC2458 TRANSISTOR 2SC2458 TRANSISTOR 2SC2009 TRANSISTOR 2SC2458 TRANSISTOR 2SC2458 TRANSISTOR 2SC2158			R023 R024 R025 R026 R027	1-247-875-00 1-247-863-00 1-247-871-00 1-247-847-00 1-247-855-00	C ARBON C ARBON	68K 22K 47K 4.7K 10K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
Q203 8-729-245-83 Q204 8-729-245-83 Q205 8-729-245-83 Q206 8-729-245-83 Q207 8-729-245-83	TRANSISTOR 25C2458 TRANSISTOR 25C2458 TRANSISTOR 25C2458 TRANSISTOR 25C2458 TRANSISTOR 25C2458 TRANSISTOR 25C2458			R028 R029 R030 R031 R032	1-247-855-00 1-247-871-00 1-247-859-00 1-247-871-00 1-247-847-00	CARBON CARBON CARBON	10K 47K 15K 47K 4.7K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
Q208 8-729-900-33 Q209 8-729-900-33 Q210 8-729-900-33 Q301 8-729-245-83 Q302 8-729-245-83	TRANSISTOR DTC144EF TRANSISTOR DTC144EF TRANSISTOR DTC144EF TRANSISTOR 2SC2458 TRANSISTOR 2SC2458			R033 R034 R035 R036 R038	1-247-863-00 1-247-871-00 1-247-807-00 1-247-807-00 1-247-831-00	C ARBON C ARBON C ARBON	22K 47K 100 100 1K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
Q304 8-729-117-54 Q305 8-729-245-83 Q306 8-729-245-83 Q307 8-729-117-54	TRANSISTOR 2SC2458 TRANSISTOR 2SC2458 TRANSISTOR 2SA1175			R039 R040 R044 R045 R046	1-247-831-00 1-247-831-00 1-247-815-00 1-247-815-00 1-247-815-00	C ARBON C ARBON C ARBON C ARBON	1K 1K 220 220 220	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
Q308 8-729-245-83 Q309 8-769-200-30 Q310 8-729-245-83 Q311 8-729-117-54 Q312 8-729-245-83 Q313 8-729-117-54	TRANSISTOR 2SC2458 TRANSISTOR 2SA1175 TRANSISTOR 2SC2458			R047 R048 R049 R050 R051	1-247-815-00 1-247-815-00 1-247-815-00 1-247-815-00 1-247-799-00	C ARBOM	220 220 220 220 47	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
Q314 8-729-245-83 Q315 8-729-245-83	TRANSISTOR 2SC2458 TRANSISTOR 2SC2458			R053 R054 R055 R056	1-247-799-00 1-247-831-00	CARBON CARBON CARBON	47 1K 1K 330	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/4W	F
RES	SISTOR			R101	1-247-839-00	CARBON	2.2K	5%	1/6W	
R001 1-247-831-00 R002 1-247-841-00 R003 1-247-831-00 R004 1-247-841-00 R005 1-247-857-00	C ARBON 2.7K C ARBON 1K C ARBON 2.7K	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W		R102 R104 R105 R106	1-247-839-00	CARBON CARBON CARBON	2.2K 330K 3.3K 33K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W	
R006 1-247-871-00 R007 1-247-863-00 R008 1-247-863-00 R009 1-247-863-00 R010 1-247-863-00	C ARBON 22K C ARBON 22K C ARBON 22K	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W		R107 R108 R109 R110 R111	1-247-877-00 1-247-886-00 1-247-847-00 1-247-845-00 1-247-815-00	C ARBON C ARBON C ARBON	82K 200K 4.7K 3.9K 220	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R011 1-247-831-00 R012 1-247-863-00 R013 1-247-863-00 R014 1-247-847-00 R015 1-247-663-00	C ARBON 1K C ARBON 22K C ARBON 22K C ARBON 4.7K	5% 1/6W 5% 1/6W 5% 1/6W 5% 1/6W 5% 1/4W	F	R112 R113 R114 R115 R117	1-247-831-00 1-247-815-00 1-247-837-00 1-247-841-00 1-247-835-00	CARBON CARBON	1K 220 1.8K 2.7K 1.5K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R016 1-247-863-00 R017 1-247-863-00	CARBON 22K	5% 1/6W 5% 1/6W		R118 R151 R152	1-247-901-00 1-247-879-00 1-247-879-00	CARBON	820K 100K 100K	5% 5% 5%	1/6W 1/6W 1/6W	



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Ref.No Part No.	Description	1	Ren	mark   R	Ref.No	art No.	Description				Remark
R154 1-247-85 R202 1-247-82 R203 1-247-82	3-00 CARBON 7-00 CARBON 9-00 CARBON 9-00 CARBON 9-00 CARBON	22K 5% 12K 5% 820 5% 820 5% 820 5%	1/6W 1/6W 1/6W 1/6W 1/6W	R R R	R262 ] R263 ] R264 ]	1-247-869-00 1-247-855-00 1-247-857-00 1-247-879-00 1-247-879-00	C ARBON C ARBON C ARBON C ARBON C ARBON	39K 10K 12K 100K 100K	5% 5% 5%	1/6W 1/6W 1/6W 1/6W	
	3-00 CARBON 7-00 CARBON 7-00 CARBON	22K 5% 4.7K 5% 82K 5% 1K 5%	1/6W 1/6W 1/6W 1/6W	R R R	R266 1 R270 1 R271 1	1-247-871-00 1-247-855-00 1-247-855-00 1-247-855-00	CARBON CARBON CARBON CARBON	47K 10K 10K 10K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R209 1-247-86		39K 5%	1/6W			-247-855-00	CARBON	10K	5%	1/6W	
R211 1-247-83 R212 1-247-87 R213 1-247-81 R214 1-247-81 R215 1-247-83	1-00 CARBON 9-00 CARBON	2.2K 5% 47K 5% 330 5% 330 5% 2.2K 5%	1/6W 1/6W 1/6W 1/6W 1/6W	R R R	R275 ] R276 ] R277 ]	1-247-835-00 1-247-887-00 1-247-887-00 1-247-855-00 1-247-855-00	CARBON CARBON CARBON CARBON CARBON	1.5K 220K 220K 10K 10K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R216 1-247-86 R217 1-247-86 R219 1-247-87 R220 1-247-87 R221 1-247-87	3-00 CARBON 9-00 CARBON	27K 5% 22K 5% 100K 5% 100K 5% 100K 5%	1/6W 1/6W 1/6W 1/6W 1/6W	R R R	R280 1 R281 1 R282 1 R283 1	1-247-825-00 1-247-825-00 1-247-775-00 1-247-775-00 -247-871-00 1-247-847-00	CARBON CARBON CARBON CARBON CARBON CARBON	560 560 4.7 4.7 47K 4.7K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R222 1-247-87 R223 1-247-83 R224 1-247-83 R225 1-247-83 R226 1-247-83	1-00 CARBON 1-00 CARBON	100K 5% 1K 5% 1K 5% 1K 5% 1K 5%	1/6W 1/6W 1/6W 1/6W 1/6W	R R R	R285 1 R301 1 R302 1 R303 1	1-247-847-00 1-247-805-00 1-247-805-00 1-247-821-00	CARBON CARBON CARBON CARBON CARBON CARBON	4.7K 82 82 390 330	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W 1/6W	
R230 1-247-83	3-00 CARBON 5-00 CARBON	22K 5% 470 5% 1.5K 5% 1.5K 5% 1K 5%	1/6W 1/8W F 1/6W 1/6W 1/6W	R R R	R306 1 R307 1 R308 1	-247-851-00 -247-833-00 -247-831-00	C ARBON C ARBON C ARBON C ARBON C ARBON	22K 6.8K 1.2K 1K 33K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R232 1-247-83 R238 1-247-85 R239 1-247-85 R240 1-247-87 R241 1-247-87	5-00 CARBON 5-00 CARBON	1K 5% 10K 5% 10K 5% 100K 5% 100K 5%	1/6W 1/6W 1/6W 1/6W 1/6W	R R R	R311 1 R312 1 R313 1	-247-831-00 -247-813-00 -247-831-00	C ARBON C ARBON C ARBON C ARBON C ARBON C ARBON	47K 1K 180 1K 47	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
	9-00 CARBON	100K 5% 100K 5% 470K 5% 220K 5% 220K 5%	1/6W 1/6W 1/6W 1/6W 1/6W	R R R	317 1 318 1 319 1	-247-818-00 -247-859-00 -247-835-00	C ARBON C ARBON C ARBON C ARBON C ARBON	10K 300 15K 1.5K 1K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R249 1-247-85 R250 1-247-89 R251 1-247-84	5-00 CARBON 5-00 CARBON 5-00 CARBON 8-00 CARBON 8-00 CARBON	10K 5% 10K 5% 470K 5% 5.1K 5% 2K 5%	1/6W 1/6W 1/6W 1/6W 1/6W	R R R	322 1 324 1 325 1	-247-831-00 -247-821-00 -247-831-00 -247-831-00 -247-833-00	CARBON CARBON	1K 390 1K 1K 1.2K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R254 1-247-85 R255 1-247-85 R256 1-247-83	7-00 CARBON 5-00 CARBON 5-00 CARBON 9-00 CARBON 5-00 CARBON	82K 5% 10K 5% 10K 5% 2.2K 5% 10K 5%	1/6W 1/6W 1/6W 1/6W 1/6W	R:	328 1 329 1 330 1	-247-835-00 -247-835-00 -247-831-00 -247-829-00 -247-865-00	CARBON CARBON CARBON	1.5K 1.5K 1K 820 27K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
R259 1-247-88	7-00 CARBON 7-00 CARBON 6-00 CARBON	100 5% 220K 5% 75K 5%	1/8W F 1/6W 1/6W	R	333 1	~247~865~00 ~247~839~00 ~247~815~00	CARBON	27K 2.2K 220	5% 5% 5%	1/6W 1/6W 1/6W	



Ref.No Part No.	Description				Remark	Ref.No Part No. Description	Remark
R335 1-247-821-00 R336 1-247-815-00 R337 1-247-821-00 R338 1-247-823-00 R339 1-247-863-00	C ARBON C ARBON C ARBON	390 220 390 470 22K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		RV202 1-228-727-00 RES, ADJ, CERAMIC CARB RV301 1-228-723-00 RES, ADJ, CERAMIC CARB RV302 1-228-721-00 RES, ADJ, CERAMIC CARB RV303 1-228-719-00 RES, ADJ, CERAMIC CARB RV304 1-228-724-00 RES, ADJ, CERAMIC CARB	ON 4.7K ON 2.2K ON 470
R340 1-247-857-00 R341 1-247-847-00 R342 1-247-831-00 R343 1-247-879-00 R344 1-247-807-00	C ARBON C ARBON C ARBON	12K 4.7K 1K 100K 100	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		RV305 1-228-723-00 RES, ADJ, CERAMIC CARB RV306 1-228-723-00 RES, ADJ, CERAMIC CARB FILTER	ON 4.7K ON 4.7K
R345 1-247-855-00 R346 1-247-863-00 R347 1-247-887-00 R348 1-247-839-00 R349 1-247-851-00	C ARBON C ARBON C ARBON C ARBON	10K 22K 220K 2.2K 6.8K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		SF101 1-404-438-00 FILTER, SAW SF2014:4-362-287-00 SHIELD, SAWF TRANSFORMER  T301 1-426-121-00 DAT	
R350 1-247-877-00 R351 1-247-843-00 R352 1-247-831-00 R353 1-247-851-00 R354 1-247-849-00	C ARBON C ARBON C ARBON	82K 3.3K 1K 6.8K 5.6K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		TUNER TU1014, 1-463-421-21 TUNER, ET (BT-883) CRYSTAL	
R355 1-247-839-00 R356 1-247-843-00 R357 1-247-855-00 R358 1-247-859-00 R359 1-247-855-00	C ARBON C ARBON C ARBON	2.2K 3.3K 10K 15K 10K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		X301 1-527-588-21 OSCILLATOR, CRYSTAL  ***********************************	******
R360 1-247-851-00 R361 1-247-843-00 R362 1-247-871-00 R363 1-247-903-00 R364 1-247-851-00	C ARBON C ARBON	6.8K 3.3K 47K 1M 6.8K	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		<b>1</b> -608-335-00 C BOARD 1-526-616-00 SOCKET, CRT <b>1</b> -362-279-00 SPACER, TR	
R365 1-247-885-00 R366 1-247-849-00 R367 1-247-807-00 R368 1-247-819-00 R369 1-247-819-00	C ARBON C ARBON C ARBON	180K 5.6K 100 330 330	5% 5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		CONNECTOR  A5	6P
R370 1-247-819-00 R371 1-247-843-00 R372 1-247-843-00 R373 1-247-843-00 R374 1-247-855-00	C ARBON C ARBON C ARBON	330 3.3K 3.3K 3.3K 10K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W		C701 1-123-356-00 ELECT 10MF C702 1-129-737-00 FILM 0.047MF C703 1-102-249-00 CERAMIC 680PF C704 1-161-316-00 CERAMIC 270PF C705 1-161-314-00 CERAMIC 180PF	20% 50V 20% 630V 20% 2KV 10% 50V 10% 50V
R375 1-247-807-00 R376 1-247-807-00 R377 1-247-871-00 R378 1-247-839-00 R379 1-247-839-00	C ARBON C ARBON C ARBON	100 100 47K 2.2K 2.2K		1/6W 1/6W 1/6W 1/6W 1/6W		C706 1-161-314-00 CERAMIC 180PF  CONNECTOR  D5 4:1-555-948-00 CONNECTOR ASSY, MINIATOR	10% 50V JRE 5P
R380 1-247-841-00 R381 1-247-831-00 R382 1-247-828-00 R383 1-247-831-00	C ARBON C ARBON	2.7K 1K 750 1K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W		COIL  L701 1-407-753-00 MICRO INDUCTOR 180UH L702 1-407-556-00 CHOKE COIL 6.8UH	
VAI	RIABLE RESISTOR	3				TRANSISTOR	
RV101 1-228-723-00 RV201 1-228-727-00	RES, ADJ, CER RES, ADJ, CER	RAMIC C	ARBON ARBON	4.7K 47K		Q701 8-729-322-78 TRANSISTOR 2SC2278 Q702 8-729-322-78 TRANSISTOR 2SC2278	

NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description				R	<u>emark</u>	Ref.No	Part No.	Description			Remark
Q703	8-729-322-78	TRANSISTOR 29	C2278					C504	1-108-365-00	MYLAR	0.001MF	10%	100V
								C505	1-108-381-00		0.022MF	10%	10 <b>0V</b>
	RES	ISTOR							1-108-379-00		0.015MF	10%	100V
R701	1 215 124 00	METAL	100	E~	1 /41/				1-102-989-00		68PF	5%	500V
R701	1-215-134-00 1-215-168-00		180 4.7K	5%	1/4W 1/4W			C508	1-123-380-00	FLECI	1MF	20%	50 <b>V</b>
R703	1-206-692-00		15K	5%	2W	F		l l C509	1-123-380-00	ELECT	1MF	20%	50V
R704	1-215-168-00		4.7K		1/4W	'		C510	1-108-381-00		0.022MF	10%	100V
R705	1-215-134-00		180	5%	1/4W			C511	1-106-180-00		0.0022MF	5%	100V
			_					C512	1-129-794-00		0.0033MF	5%	100V
R706	1-206-692-00		15K	5%	2W	F		C513	1-123-336-00	ELECT	470MF	20%	25V
R707 R708	1-215-138-00		270	5%	1/4W			0516	1 100 505 00	M1/1 4 D	0.04745		F.00.1
R706	1-215-168-00 1-206-692-00		4.7K	5% 5%	1/4W 2W	F		C516 C517	1-108-595-00	MYLAR	0.047MF 470PF	5% 10%	50V
R710	1-202-824-00		3.3K	3,6	1/2W	г		C517	1-123-356-00	ELECT	10MF	20%	50 <b>0V</b> 25V
		44410	00011		-/			C519	1-131-367-00	TANTALUM	22MF	10%	20V
R711	1-202-837-00		82K		1/2W				1-130-640-00	FILM	0.47MF	5%	50V
R713	1-202-824-00		3.3K		1/2W								
R714	1-202-609-00		33K		1/2W			C522	1-123-379-00		0.47MF	20%	50 <b>V</b>
R715	1-202-841-00		180K		1/2W			C523	1-123-380-00		1MF	20%	50V
R716	1-202-824-00	SOLID	3.3K		1/2W				1-108-377-00		0.01MF	10%	100V
R717	1-202-719-00	COLID	1M	10%	1/2W			C525	1-123-380-00		1MF	20%	50V
R718	1-202-549-00		100	10%	1/2W			C526	1-108-384-00	MILAK	0.039MF	10%	100V
R719	1-202-842-00		220K	200	1/2W			C527	1-108-367-00	MYI AR	0.0015MF	10%	100V
R720	1-202-846-00		470K		1/2W			Ç528	1-123-380-00		1MF	20%	50V
R721	1-202-848-00	SOLID	680K		1/2W			C529	1-108-198-00	MYLAR	0.012MF	10%	100V
								C531	1-123-322-00	ELECT	330MF	20%	16V
R722	1-215-128-00		100	5%	1/4W			C533	1-123-360-00	ELECT	1.00MF	20%	5 <b>0V</b>
R723 R724	1-215-128-00		100	5%	1/4W			0524	1 100 277 00	****	0.01115	100	1001
K/24	1-215-128-00	METAL	100	5%	1/4W				1-108-377-00 1-108-372-00		0.01MF 0.0039MF	10% 10%	100V 100V
	VAR	IABLE RESISTOR	>						1-124-192-00		4.7MF	20%	50V
		TABLE RESISTON	-					C537	1-108-377-00		0.01MF	10%	100V
RV701	1-228-723-00	RES. ADJ. CER	RAMIC C	ARBON	4.7K			C538	1-108-385-00		0.047MF	10%	100V
RV702	1-228-723-00	RES, ADJ, CER	RAMIC C	ARBON	4.7K								
RV703	1-228-723-00	RES, ADJ, CER	RAMIC C	ARBON	4.7K				1-101-810-00		100PF	5%	50 <b>0V</b>
RV704	1~228~717~00	RES, ADJ, CER	RAMIC C	ARBON	220			C540	1-108-365-00	MYLAR	0.001MF	10%	100V
RV705	1-228-717-00	KES, ADJ, CER	CAMIC C	AKBON	220				1-161-961-11		0.0022MF	101	3KV
RV706	1-226-114-00	RES. ADJ. MET	TAL GLA	7F 2.	2M				1-108-387-00 1-130-956-11		0.068MF 0.0133MF	10% 3%	100V 1.2KV
RV707	1-226-114-00	RES, ADJ, MET	AL GLA	ZE 2.	2M			-04 10 ///		e, a series	OF OF GOLH		******
								C544	1-130-959-00	FILM	0.047MF	5%	400V
	<u>SPA</u>	RK GAP						C545	1-102-223-00		0.0047MF	20%	1.6KV
60701	1 510 050 00								1-123-254-00		10MF		25 <b>0</b> V
SG 7 01 SG 7 02	1-519-063-XX 1-519-063-XX	DISCHARGING G	iAP					C547	1-102-038-00		0.001MF	00**	500V
	1-519-063-XX	DISCHARGING G	AP AP					C548	1-123-357-00	ELECT	22MF	20%	50 <b>V</b>
SG 7 04	1-519-063-XX	DISCHARGING G	AP					C549	1-123-334-00	FLECT	220MF	20%	25V
SG 7 05	1-519-063-XX	DISCHARGING G							1-123-333-00		100MF	20%	25V
							1		1-102-038-00		0.001MF	,	500V
SG 7 0 6	1-519-063-XX	DISCHARGING G	AP				j	C552	1-123-346-00	ELECT	220MF	20%	35V
	*****		a de ale ale de ale ale	. An all also de also also				C553	1~108~381~00	MYLAR	0.022MF	10%	10 <b>0V</b>
~ n = ~ a a a				****	****	ਜ ਜ ਜੋ 1	*****	CEEA	1 100 205 00	MVIAD	0.047***	100	1004
	: A-1345-385-A	D BOARD, COMP	HETE					C554 C555	1-108-385-00 1-123-332-00		0.047MF	10%	100V
•	ALCOHOLD TO THE	*******						C556	1-123-332-00		47MF 47MF	20% 20%	16V 16V
							ł	C557	1-130-547-00		1.5MF	5%	200V
	CAP	ACITOR							1-136-105-00		0.33MF	10%	250V
							ĺ	,				,-	
C501	1-123-024-00		33MF		0.0**	160		C559	1-108-377-00		0.01MF	10%	100V
C502 C503	1-123-333-00 1-108-385-00		100MF 0.047M	c	20% 10%	25\			1-130-547-00		1.5MF	5%	200V
0303	7-100-202-00	ELL PWV	U. U4/M	H.	10%	100	N4	C561	1-123-356-00	ELECI	10MF	20%	25V

NOTE: The components identified by shading and mark A are critical for safety. Replace only with part number specified.



Ref.No Part No.	Description	Remark	Ref.No	Part No.	Description			Remark
C562 1-102-002-00		0% 500V		TRA	NSISTOR			
C563 1-123-379-00 C564 1-101-003-00 C565 1-108-381-00 C566 1-108-377-00	CERAMIC 0.0047MF MYLAR 0.022MF 10	0% 50V 50V 0% 100V 0% 100V	Q501 Q502 Q503	8-729-168-82	TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S BUSHING (B), RETAINER (TO-	C2688 C1413A TR, Q503	CICTOD O	502
					•		31310K, Q	003
D1	PLUG, CONNÉCTOR (2.5MM) 10P PLUG, CONNECTOR (2.5MM) 4P 2P PLUG (M)		Q509	6:4-329-407-00 6:4-336-010-00 6:4-362-210-00 8-729-313-42 6:4-323-833-00	HEAT SINK, Q5 SHEET (TO-3), TRANSISTOR 2S	03 Q503 D1134	509	
D6 <b>1-508-784-00</b> D7 <b>1-508-784-00</b>				RES	ISTOR			
D8 4:1-508-784-00	1P PLUG		R501 R502 R503	1-206-692-00 1-215-140-00 1-247-613-00	METAL	15K 55 330 55 6.8K 55	6 1/4W	F
<u>510</u>	<u> </u>		R504	1-215-198-00	METAL	82K 5		
<b>D501</b> 8-719-911-19 <b>D502</b> 8-719-911-19	DIODE ISS119 DIODE ISS119		R505	1-215-164-00	METAL	3.3K 5		
D504 8-719-911-19 D506 8-719-300-45			R506	1-247-168-00		36K 55		
D507 8-719-305-15			R507 R511	1-215-178-00	METAL METAL	12K 59		
			R512	1-214-768-00	METAL	43K 19		
D508 8-719-928-08 D509 8-719-903-09 D510 8-719-300-76	DIODE ERD28-08 DIODE V30N DIODE RH1A		R513 R514	1-215-168-00		<b>4.</b> 7K 59		
D511 8-719-901-93	DIODE V19E		R515	1-215-168-00		4.7K 59		
D512 8-719-901-93	DIODE V19E		R516	1-215-168-00	METAL	4.7K 59	6 1/4W	_
D513 8-719-901-93	DIODE V19E		R517 R518	1-212-363-00	METAL OXIDE	1.8 5% 390 5%		F
D514 8-719-300-45			Karo	1-213-142-00	METAL	390 59	6 1/4W	
D515 8-719-300-45	DIODE EM1Z		R519	1-215-162-00		2.7K 59		
DE1-	AY LINE		R520 R521	1-214-770-00 1-215-148-00	METAL METAL	51K 19 680 59		
DEL	AT EINE		R522	1-247-120-00		680 59 360 59		
DY1 4:1-506-348-XX DY2 4:1-506-348-XX	3P PLUG (L) 3P PLUG (L)		R523	1-214-755-00	METAL	12K 19		
	(2)		R524	1-214-759-00		18K 19		
<u>IC</u>			R525	1-215-194-00		56K 59		
IC 501 8-759-100-60	IC UPC1377C		R526 R527	1-215-162-00 1-215-166-00	METAL METAL	2.7K 59 3.9K 59		
IC 502 8-759-113-78	IC UPC1378H-L		R528	1-215-138-00		270 5%		
IC 503 8-759-905-39	IC TDA1082							_
IC 505 8-759-700-06	IC NJM7812B HEAT SINK (A), IC505		R530 R531	1-206-694-00	METAL OXIDE	18K 5% 82K 5%		F
<b>5.</b> 4.546.764.66	11EA 31 11K (A), 10303	i	R531	1-215-152-00		82K 5%		
<u>C01</u>	<u>L</u>		R533	1-247-095-00	METAL	33 5%		
L502 1-459-075-00	COTI DVNAMIC CONVERSION CH	IONE 3 SMMI	R544	1-215-200-00	METAL	100K 5%	1/4W	
L502 1-459-075-00 L503 1-408-225-00	COIL, DYNAMIC CONVERSION CH MICRO INDUCTOR 3.3UH	TUNE 3.3MMH	R545	1-215-180-00	METAL	15K 5%	1/4W	
L504 1-407-365-00	COIL, CHOKE (HIGH FREQUENCY	() 0.7UH	R546	1-215-176-00		10K 5%		
L505 1-459-104-00 L506 1-408-242-00	COIL, DUST CORE 10MMH MICRO INDUCTOR 10MMH		R547	1-215-148-00	METAL	680 5%	1/4W	_
F300 T-400-545-00	HITCHO THROCLOK TOMMI	1	R551 R552	1-247-783-00		10 5% 330 5%		F
L507 1-459-241-00	COIL, HORIZONTAL LINIALITY					300 38	. 141	
	COIL (WITH CORE)		R553	1-213-137-00		330 5%		F
L509 1-408-240-00	MICRO INDUCTOR 6.8MMH	ì	R554 R555	1-215-174-00 1-215-188-00	METAL METAL	8.2K 5% 33K 5%		
			R556	1~215~194~00	METAL	56K 5%	1/4W	
		ļ	R557	1-215-182-00	METAL.	18K 5%	1/4W	

Ref.No Part No.	Description			Remark	Ref.N	o Part No.	Description			Remark
R558 1-215-182-00 R559 1-215-169-00 R560 1-215-167-00 R561 1-215-196-00 R562 1-215-182-00	METAL METAL METAL	5.1K 5 4.3K 5 68K 5	5% 1/4W 5% 1/4W 5% 1/4W 5% 1/4W 5% 1/4W		J951	<u>JAC</u> 1-507-657-00 <u>RES</u>	_			
R563 1-215-136-00 R564 1-215-176-00 R565 1-215-192-00 R566 1-215-130-00 R567 1-205-642-00	METAL METAL METAL	10K 5 47K 5 120 5	5% 1/4W 5% 1/4W 5% 1/4W 5% 1/4W 10% 5W			1-244-865-00 1-244-865-00	CARBON	470 5% 470 5%	1/2W 1/2W	****
R568 1-246-995-00 R569 1-247-831-00 R570 1-246-979-00 R571 1-247-636-00 R573 1-247-636-00	C ARBON C ARBON C ARBON	1.2 5 0.47 5	5% 1/8W 5% 1/8W 5% 1/8W 5% 1/8W 5% 1/8W	F F		<u>CON</u> <b>:</b> 1-610-005-00 <u>CON</u> <b>3</b> :1-508-766-00	NECTOR			
R574 1-202-407-15			5% 1/4W			<b>♦:1-556-555-00</b>	-			
				F F		************ <b>6:1-610-003-00</b>		*****	****	*****
R579 1-213-147-00 R599 1-247-131-00	METAL OXIDE	2.2K 5	5% 1W 5% 1/4W	F		CAP	ACITOR			
	RIABLE RESISTOR		2,		C901 C902	1-101-003-00 1-101-003-00	CERAMIC	0.0047MF 0.0047MF		50V 50V
RV504 1-224-248-XX	RES, ADJ, MET RES, ADJ, CER RES, ADJ, MET RES, ADJ, CER	AMIC CAF	RBON 470 E 470		C903 C904 C905	1-102-973-00 1-102-973-00 1-101-003-00 1-101-003-00	CERAMIC CERAMIC	100PF 100PF 0.0047MF		50V 50V 50V
RV506 1-228-721-00	RES, ADJ, CER	AMIC CAF	RBON 2.2K		C907 C908	1-110-182-81 1-110-182-81		0.022MF 0.022MF	10% 10%	250V 250V
RV507 1-228-724-00 RV508 1-223-102-00						CON	NECTOR			
SP	ARK GAP				J2 •	\$:1-560-278-00 \$:1-560-278-00	PLUG, CONNEC	TOR 3P		
SG 501 1-519-063-XX		iAP				<b>6:1-560-278-00</b> <b>6:1-560-278-00</b>				
_	TRANSFORMER,	HOD I 70N	TAI NOTVE			JAC	<u>K</u>			
T503 <u>A</u> 1-421-520-00	TRANSFORMER,			*****	J901 J902 J903 J904	1-526-728-00 1-526-728-00 1-561-580-21 1-562-119-00	SOCKET, SPEA JACK, DIN 6P	KER		
<b>4:1-610-004-00</b>	J2 BOARD					RES	ISTOR			
CA	PACITOR				R901 R902	1-247-831-00 1-247-823-00		1K 51 470 5%	1/6W 1/6W	
C951 1-101-003-00 C952 1-101-003-00		0.0047MI 0.0047MI		50V 50V	R903	1-247-823-00	CARBON	470 5%	1/6W	
co	NNECTOR					*****				
J4	PLUG, CONNECT PLUG, CONNECT					<b>4:1</b> -610-001-00	****	ED HOLDED		
						<b>♦:4-366-807-00</b>	COVER (C), L	ED HOLDEK		

NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

# HN

Ref.No Part No.	Description		Remark	Ref-No	Part No.	Description				Remark
C401 1-123-612-00 C402 1-123-608-00	ELECT 0.2		50V	R416 R417 R418 R419 R421	1-247-833-00 1-247-831-00 1-247-831-00 1-247-839-00 1-247-831-00	CARBON CARBON CARBON	1.2K 1K 1K 2.2K 1K	5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
D401 8-719-911-19 D402 8-719-911-19 D403 8-719-911-19 D404 8-719-911-19	DIODE 1SS119 DIODE 1SS119 DIODE 1SS119 DIODE 1SS119 DIODE 1SS119 DIODE 1SS119			R423 R425 R427 R428 R430	1-247-807-00 1-247-811-00 1-247-863-00 1-247-863-00 1-247-863-00	C ARBON C ARBON C ARBON	100 150 22K 22K 22K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
D407 8-719-911-19 D408 8-719-911-19 D409 8-719-911-19				R431 R432 R433 R434 R435	1-247-847-00 1-247-847-00 1-247-847-00 1-247-863-00 1-247-871-00	C ARBON C ARBON C ARBON C ARBON	4.7K 22K 47K	5% 5%	1/6W 1/6W 1/6W 1/6W 1/6W	
D411 8-719-911-19 LED401 8-719-803-20  \$:1-526-634-00 LED402 8-719-901-96 \$:4-362-295-00	DIODE 1SS119 DIODE 1SS119 DIODE TLR320 SOCKET, IC (8P), DIODE SLP161B HOLDER (C), LED	LED401 ,LED402		R436 R437 R439 R440	1-247-863-00 1-247-857-00 1-247-849-00 (1-247-861-00	C ARBON C ARBON	22K 12K 5.6K 18K	5% 5% 5% 5%	1/6W 1/6W 1/6W 1/6W	
LED404 8-719-800-24 •:4-362-207-00 LED406 8-719-901-96 •:4-357-812-00 •:4-362-219-00	DIODE TLR147 HOLDER (P), LED, DIODE SLP161B HOLDER, LED, LED, COVER (W), LED HO	LED404 406 OLDER, LED40	6	RV402 RV403 RV404	1-228-540-00 1-228-539-00 1-228-539-00 1-228-539-00 1-228-539-00	RES, VAR, CAR RES, VAR, CAR RES, VAR, CAR	BON 10 BON 10 BON 10	K K K		
LED408 8-719-901-96  \$:4-362-295-00  LED409 8-719-901-96  \$:4-362-295-00	HOLDER (C), LED,	LED408 LED409		RV407 RV408	1-228-539-00 1-228-539-00 1-228-539-00 1-228-540-00	RES, VAR, CAR RES. VAR. CAR	BON 10 BON 10	K K		
<u>TR.</u>	ANSISTOR			j	SWI	TCH				
Q402 8-729-245-83 Q403 8-729-245-83 Q404 8-729-117-54	TRANSISTOR 2SA11 TRANSISTOR 2SC24 TRANSISTOR 2SC24 TRANSISTOR 2SA11 TRANSISTOR 2SC24	58 58 75		\$401 \$402 \$403 \$404 \$405	1-552-774-00 1-552-774-00 1-552-774-00 1-552-774-00 1-552-774-00	SWITCH, PUSH SWITCH, PUSH SWITCH, PUSH				
Q409 8-729-245-83	TRANSISTOR 2SC24 TRANSISTOR 2SC24 SISTOR	58 58		S406 S407 S408 S409	1-552-774-00 1-552-774-00 1-552-774-00 1-552-774-00	SWITCH, PUSH SWITCH, PUSH				
R401 1-247-861-00 R402 1-247-827-00 R403 1-247-831-00 R404 1-247-865-00 R405 1-247-863-00	C ARBON 181 C ARBON 681 C ARBON 1K C ARBON 271	K 5% 1/6	5W 5W 5W	S410 S411 S412 S413	1-552-774-00 1-552-774-00 1-554-118-00 1-554-118-00	SWITCH, PUSH SWITCH, PUSH SWITCH, PUSH SWITCH, PUSH				
R406 1-247-867-00 R407 1-247-843-00 R408 1-247-863-00 R409 1-247-863-00 R411 1-247-871-00	CARBON 3.3 CARBON 22N CARBON 22N	3K 5% 1/6 C 5% 1/6 C 5% 1/6	5W 5W 5W	•	:1-606-794-00 :4-342-117-00	N BOARD ******* CASE, SHIELD	(MAIN)		*****	*****
R413 1-247-895-00 R415 1-247-863-00				•	:4-342-118-00	LID, SHIELD CA	ASE, R			

Ref.N	o Part No.	Description			Remark	Ref.No Part No. Description Ref.No Part No.	emark
	CAP	CITOR				ACCESSORIES AND PACKING MATERIALS	
C1 C2 C3 C4 C5	1-123-617-00 1-123-617-00 1-123-617-00 1-161-019-00 1-108-567-00 1-123-821-00	ELECT ELECT CERAMIC MYLAR ELECT	10MF 10MF 10MF 0.033MF 0.0033MF	20% 20% 20% 10% 5%	16V 16V 16V 25V 50V	Part No. Description R.  A-1470-625-A COMMANDER ASSY (RM-635) 3-701-360-00 LABEL, TACK 4-362-269-00 BAG, PROTECTION 4-362-270-00 CUSHION (UPPER) (ASSY) 4-362-271-00 CUSHION (LOWER) (ASSY)	<u>emark</u>
D1	<u>DIC</u> 8-719-110-32 <u>IC</u>		3			4-364-504-00 INDIVIDUAL CARTON 4-491-710-10 INSTRUCTION, TELETEXT 4-493-822-11 MANUAL, INSTRUCTION	
IC1	8-759-113-73	IC UPC1373H					
	<u>co</u> 1	<u>IL</u>					
L1	1-404-310-00	COIL 4.7MM	1				

### MISCELLANEOUS

A.1-228-714-21 A.1-451-204-31 1-452-032-00 1-452-094-00 1-452-146-00	MAGNET, DISK; 10MM ø
A.1-536-797-11	TERMINAL BOARD ASSY, ANTENNA
1-543-179-00	CORE, RING
A.1-551-270-31	CORD, POWER
•:1-551-604-00	CONNECTOR ASSY, MINIATURE 3P
•:1-551-612-00	CONNECTOR ASSY, MINIATURE (2P)
6:1-551-614-00	CONNECTOR ASSY, MINIATURE 2P
6:1-551-674-00	CONNECTOR ASSY 3P
6:1-551-796-00	CONNECTOR ASSY (2.5MM) 6P
6:1-551-922-00	CONNECTOR ASSY 3P
6:1-555-817-00	CONNECTOR ASSY (2.5MM) 4P
<b>1.</b> -556-017-00 <b>1.</b> -556-322-00 <b>1.</b> -556-325-00 <b>1.</b> -556-405-00 <b>1.</b> -556-408-00	CONNECTOR ASSY (2.5MM) 3P CONNECTOR ASSY (2.5MM) 6P CONNECTOR ASSY (2.5MM) 4P CONNECTOR, MINIATURE 2P CONNECTOR ASSY (LARGE) 3P
<b>♦:1-556-412-00</b>	CONNECTOR ASSY (2.5MM) 4P
<b>♦:</b> 1-556-651-00	CONNECTOR ASSY (2.5MM) 4P
<b>♦:1-556-879-00</b>	CONNECTOR ASSY (2.5MM) 10P
L901 A.1-426-087-61 L902 A.1-426-087-61 S901 A.1-553-225-12 SP901 1-503-194-00 SP902 1-503-194-00	
T502 A. 1-439-303-00	TRANSFORMER ASSY, FLYBACK
V 901 A. 8-738-704-05	CRT 520SB22

NOTE:

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

# SECTION 6 TELETEXT UNIT (V BOARD)

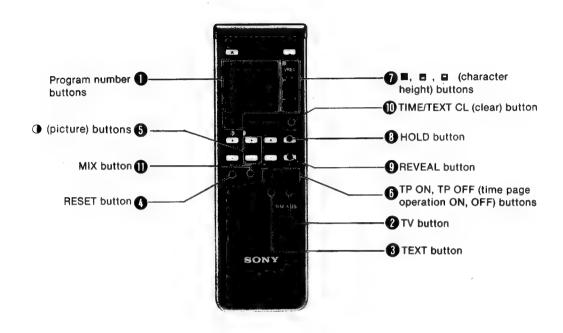
#### 6-1. TO VIEW THE TELETEXT SERVICE

#### **BEFORE OPERATION**

- First select the TV channel for the desired teletext service, then press the TEXT button. After you have pressed the TEXT button, the TV channel cannot be changed.
- To receive the teletext service of a different TV station, first restore the TV mode with the TV or RESET button, then select the new station.
- To avoid a malfunction in the teletext mode, do not operate any button which is not described here. If you become confused during the operation, press the RESET button and start again.
- In the teletext mode, be sure to keep the AFT ON button of the TV activated. Otherwise, misoperation may occur.

#### 6-2. TO ENJOY TELETEXT PROGRAMMES

#### RM-635



#### • Programme number buttons

Enable corresponding digits (0-9) to be entered into the teletext memory for page number and time.

See "Example two, six or seven".

#### TV button

Press this button to change the receiver from the teletext mode to the TV mode.

#### **1** TEXT button

Press this button to change the receiver from the TV mode to the teletext mode.

#### O RESET button

Press this button to cansel all functions and change the receiver from the teletext mode to the TV mode.

#### 6 (picture) buttons

The brightness of the teletext display is adjusted with these buttons.

#### TP ON, TP OFF (timed page operation ON, OFF) buttons

When the TP ON button is pressed, the teletext memory will capture a selected page at a preset time. This function can be useful if information on a particular page changes throughout the day. Press the TP OFF button to cancel the timed page operation.

See "Example seven".

#### 🕡 🖷 , 🚍 , 🙀 (character height) buttons

- button-Enlarges top half of the teletext display.
- button-Enlarges bottom half of the teletext display.
- button-Restores normal character height.

See "Example five".

#### O HOLD button

Enables the requested page to be held so that it cannot be updated. See "Example three".

#### **O** REVEAL button

Displays the answers in a quiz page.

See "Example eight".

#### TIME/TEXT CL (clear) button

This button suppresses the teletext display and restores the normal TV picture.

See "Example six".

This button enables the time to be displayed in the TV mode.

This time is the same as the time indication in the TEXT mode (top right hand corner). The time display will continue for 5 seconds after the release of the button.

If no teletext service is broadcast on the selected channel, the time will not be displayed.

#### MIX button

Superimposes the teletext display on the normal TV picture of the selected channel.

See "Example four".

#### **EXAMPLES OF OPERATION**

Example one

#### TO DISPLAY THE INDEX PAGE

Press the TEXT button. If this is the first time the receiver has been put in the teletext mode since be-

ing switched on, the index page of the selected teletext service will automatically appear on the screen. If it is not the first time, key in three-digit teletext service index page number using the programme number buttons. Proceed to "Example two"

Example two

#### TO OBTAIN A DESIRED TELETEXT PAGE

Key in the correct three digits for the required page. The header display at the top of the page will turn

green to show that the teletext adaptor is waiting for the page you have requested to be broadcast. When that page is next transmitted, it will be displayed on the screen.

If an error is made in keying the page number, complete the threedigit sequence by keying in any digit. Then re-key the correct page number.



Example three

#### TO STOP THE PAGE

Press the HOLD button and the teletext adaptor will stop entering any new pages into its memory. The mode is indicated in green at the top right hand corner.



This button may be used also with "Subpages". See page 7. To resume normal teletext operation, press TEXT button.

Example four

#### TO SUPERIMPOSE THE TELETEXT PAGE ON THE **NORMAL TV PICTURE**

Press the MIX button. To restore normal teletext operation, press the TEXT button. To restore normal TV operation, press the TV button. The MIX button can be used in either the teletext mode or the normal TV mode.



Example five

#### TO ENLARGE THE TELETEXT DISPLAY

The 🚍 and 🖬 buttons enlarge the teletext display to twice its normal height.

This method is very convenient for long distance viewing or for people with poor eyesight.

To enlarge the display.

1 Obtain a teletext display on the screen.



2 Operate the 💻 button. The top half of the page will now be enlarged to fill the entire screen.



3 Operate the button. The lower half of the page will now be enlarged to fill the entire screen.



To return the normal character height, press the button.

If you request another page while the lower section of a page is being displayed, the top half only of the requested page will automatically be displayed.

Example six

TO WATCH A NORMAL TV PROGRAMME WHILE THE TELETEXT ADAPTOR IS SEARCHING FOR YOUR DESIRED PAGE

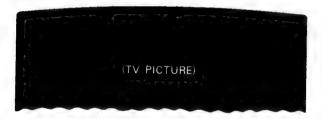
1 Obtain a teletext display on the screen.



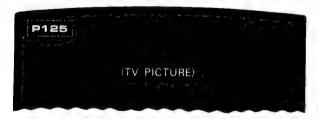
2 Now, request another page. The page header will turn green while the adaptor is waiting for the page to be transmitted.



3 Press the TEXT CL button and the normal TV picture will be restored. (The page header will be displayed for the first few seconds).



Leave the set in this mode. When your requested page has been captured by the adaptor, the page number will be shown in the top left hand corner.



If you wish to view this requested page, press the TEXT button.



Example seven

## TO HAVE A REQUESTED PAGE BROADCAST AT A PREDETERMINED TIME

The time coding facility enables you to select and store a page of text for display at some predetermined time. It may be used therefore to provide an accurate visual alarm feature reminding you that you wished to do something at a particular time e.g. when programmes on two TV channels overlap it could remind you to change channels at the correct time.

1 Obtain a teletext display on the screen by pressing the TEXT button.



2 Enter new page request.



3 Press the TP ON button. As soon as the TP ON button is pressed, the time display on the top right of the screen starts flashing.



4 Immediately enter your request time using four digits, for example 07:35.



5 Leave the set in this mode. The teletext adaptor will not capture your requested page until the present time and the preset time correspond. When they do correspond, the requested page will be entered into the teletext memory and displayed on the screen.



To watch the normal TV picture while waiting for your requested page to be displayed.

6 Press the TEXT CL button. The page header will be displayed for the first few seconds.



7 When the requested page has been captured, it will be indicated on the screen. To display the requested teletext page, press the TEXT button.



To cancel the timed page operation, press the TP OFF button in the teletext mode.

#### Notes

- The timed text facility can only be set up in the text mode of operation,
- Not all transmitted pages of teletext will allow operation of the timed text facility.
- Timed text operation will not be completed if the received channel is changed after selecting timed text mode.



#### TO REVEAL ANSWERS TO A QUIZ

When parts of a quiz page are deliberately concealed on the first display, press the REVEAL button to see

the answers. As long as this button is depressed, all parts of the page are displayed.





#### OTHER TYPES OF TELETEXT PAGES

Subpages—Each main page may be divided up into several subpages (usually marked 1/3, 2/3, and then 3/3). The time that a particular subpage is displayed should be long enough for you to read the full display. The next subpage will automatically be displayed as soon as it is broadcast. If the display time of a page is too short, use the HOLD button to cancel the automatic display of the next subpage.





Newsflash and subtitle pages—These pages are superimposed on the normal TV picture. They usually contain brief information. Select these pages in the teletext mode and press the TEXT CL button. Updated newsflashes will be automatically displayed on the screen.



#### Picture adjustment

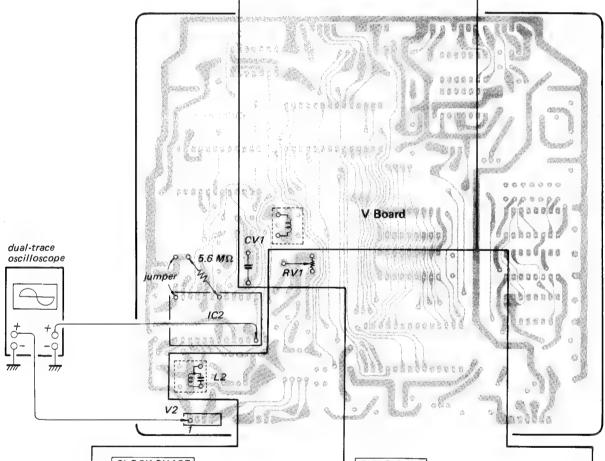
The picture level of the background normal TV picture can be adjusted by using the **()** buttons which will operated in the newsflash/subtitle page mode as well as in the MIX mode.

#### 6-3. ADJUSTMENTS

#### V BOARD ADJUSTMENTS

#### 6 MHz CLOCK

- 1. Tune in an off-air signal including the TELETEXT signal.
- 2. Press the TEXT button on the remote commander.
- Confirm that the P100 appears on the picture,
- 4. Connect a 5.6 M $\Omega$  resistor and a jumper as shown during this adjustment.
- 5. Press the MIX button on the remote commander.
- 6. Adjust CV1 so that the letter P100 does not move horizontally.
- 7. If necessary, adjust L1.
- 8. After completing this adjustment, disconnect a 5.6 M $\Omega$  resistor and a jumper.

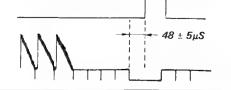


#### CLOCK PHASE

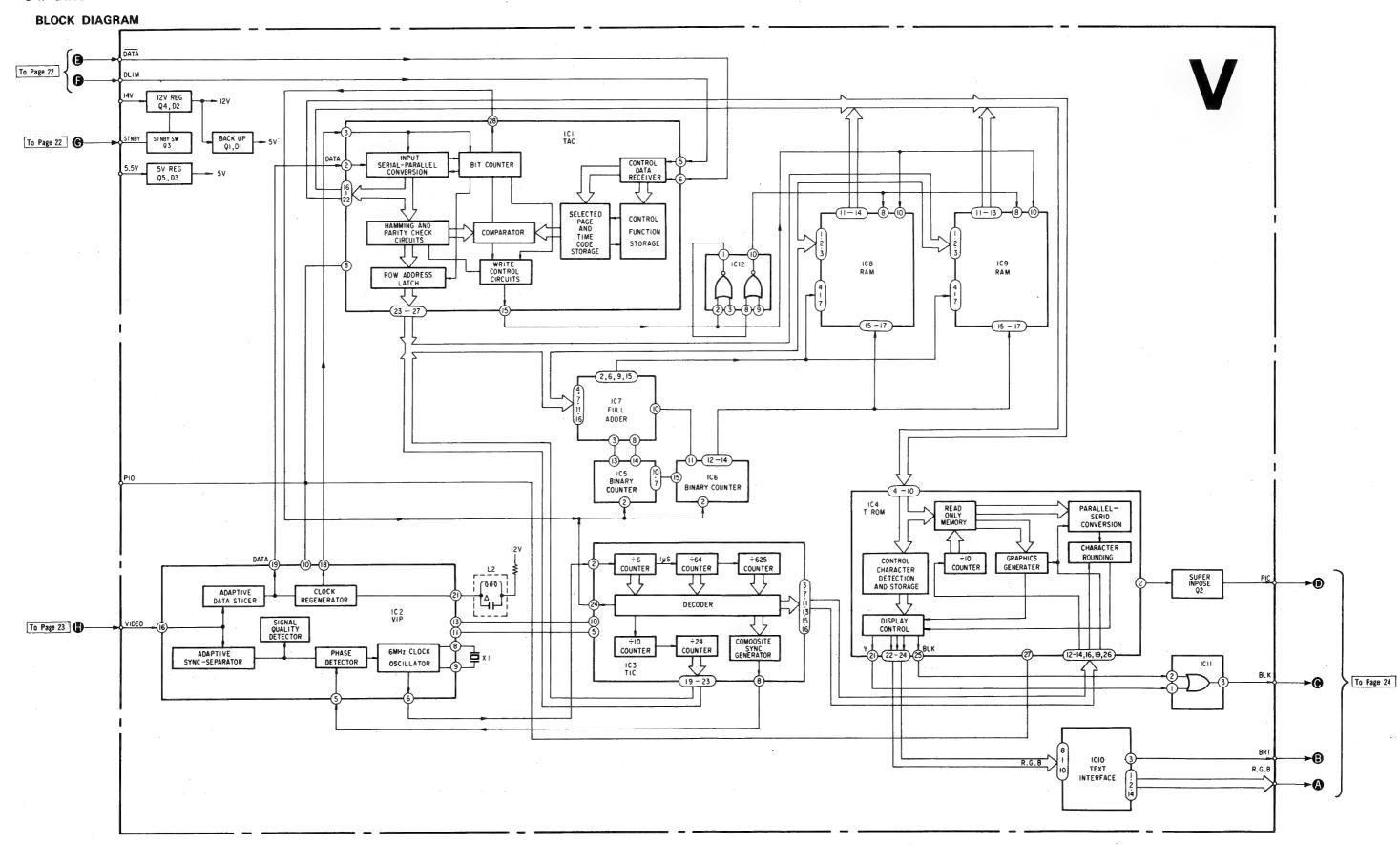
- 1. Tune in an off-air signal including the TELETEXT signal.
- 2. Press the TEXT button on the remote commander.
- 3. Adjust L2 so that the title appears on the picture.
- 4. Adjust L2 finely so that the error does not appear on other page.

### FIELD SYNC

- 1. Tune in an off-air signal.
- Connect an dual-trace oscilloscope as shown.
- 3. Extend the vertical sync portion.
- 4. Adjust RV1 to obtain the waveform on the oscilloscope as shown below.

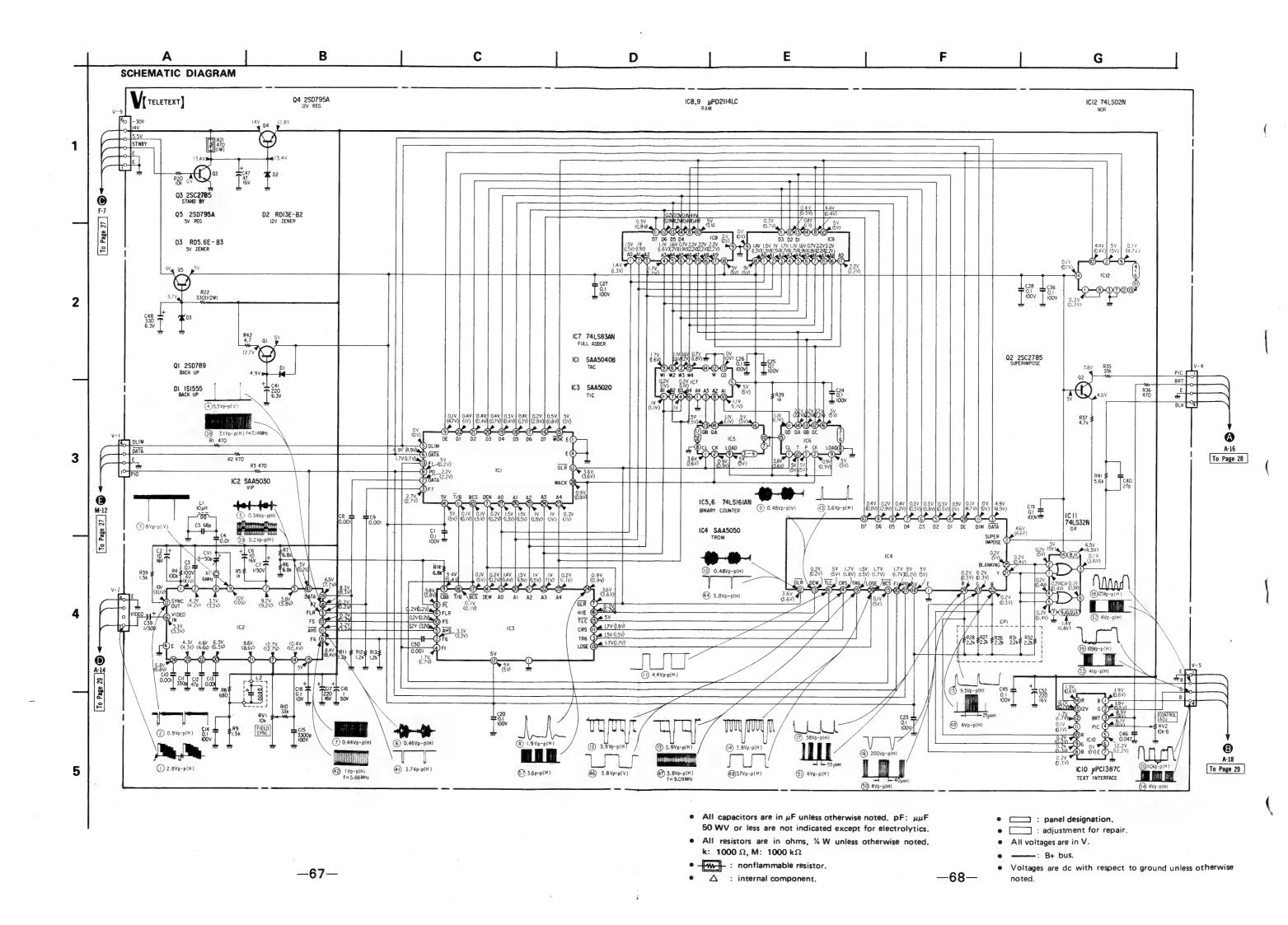


#### 6-4. DIAGRAMS



**-65-**

-66-



#### PRINTED WIRING BOARD

- Conductor Side - A B C D E F

#### **SEMICONDUCTORS**







1S1555 RD5.6E-B3 RD13E-B2

2SD795A

74LS161AN 74LS83AN



# ľ

#### SAA5020 SAA5030



#### SAA5040 SAA5050



μ**PD2114LC** 



#### 2\$C2785



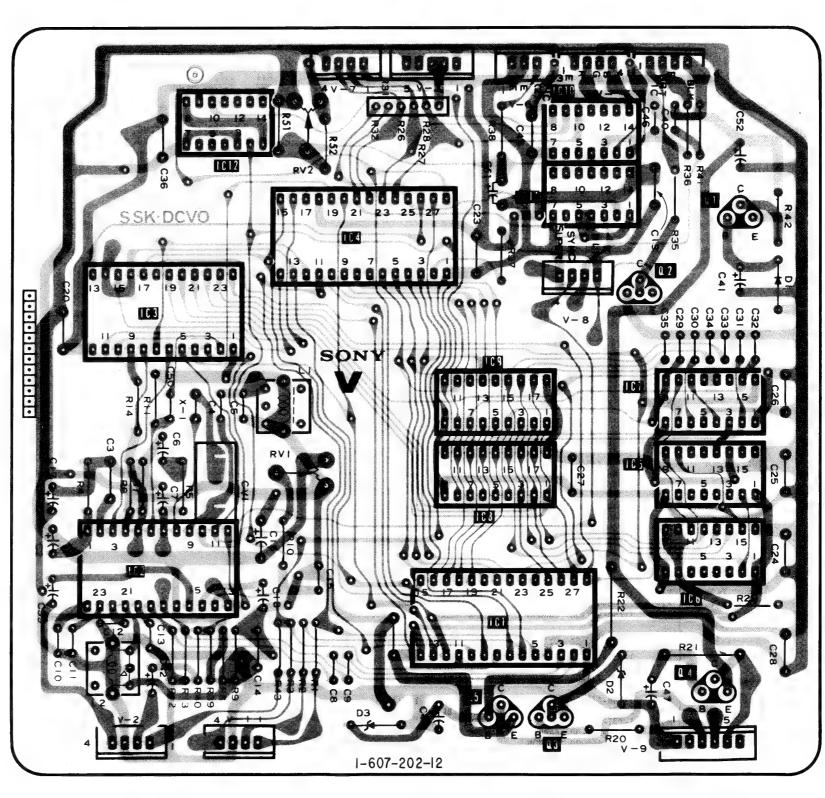
2SD774



2SD789







	Q,IC	D	ADJ
	ICI2 ICIO		RV2
	ICII IC4 I		
	2 IC3	I	
	IC9 IC7		
	IC8 IC5		R∀I
	IC6		
	ICI		
	4 5,3	2 <b>3</b>	
<i>)</i>	Q,IC	D	ADJ





#### 6-5. ELECTRICAL PARTS LIST

NOTE:

When indicating parts by reference number, please include the board name.

• Items marked " \* are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors CAPACITORS RESISTORS COILS have characteristic curve B, unless • MF : µF, PF : µµF • All resistors are in ohms • MMH : MH, UH : µH otherwise noted.

Ref.No	o.Part No.	Description			Remark	Ref.N	o.Part No.	Description				Remark
•	:A-1295-572-A		D, COMPLETE				<u>1C</u>					Tremo, N
•	:4-353-518-00 CAF					IC1 IC2 IC3 IC4	8-759-950-40 8-759-950-30 8-759-950-20 8-759-950-50	IC SAA5030 IC SAA5020				
C1 C2 C3 C4 C5	1-108-389-00 1-123-356-00 1-108-389-00 1-102-129-00 1-102-651-00	ELECT MYLAR CERAMIC CERAMIC	0.1MF 10MF 0.1MF 0.01MF 68PF	10% 20% 10% 10% 5%	100V 16V 100V 50V 50V	IC5   IC6   IC7   IC8   IC9   IC10	8-759-901-61 8-759-900-83 8-759-121-10 8-759-121-10 8-759-121-10	1C SN74LS161 IC SN74LS83/ IC UPD2114LC IC UPD2114LC	LAN AN			
C7 C8 C9	1-123-380-00 1-102-074-00 1-102-074-00 1-102-074-00	ELECT CERAMIC CERAMIC	1MF 0.001MF 0.001MF 0.001MF	20% 10% 10%	50V 50V 50V 50V	IC11 IC12	8-759-900-32 8-759-900-02	IC SN74LS02				
0.20	1 102 07 1-00	CLIGHTIC	0.001111	10%	301		<u>co1</u>	<u> </u>				
C11 C12 C13	1-102-773-00 1-101-984-00 1-102-074-00	CERAMIC	330PF 47PF 0.001MF	5% 5% 10%	50V 50V 50V	L1 L2	1-404-291-00 1-404-292-00					
C14 C15	1-108-389-00	MYLAR FILM	0.1MF 0.0033MF	10% 5%	100V 100V		TRA	NSISTOR				
C16 C17 C18 C19 C20	1-108-389-00 1-123-321-00 1-108-389-00 1-108-389-00 1-108-389-00	ELECT MYLAR	0.1MF 220MF 0.1MF 0.1MF 0.1MF	10% 20% 10% 10%	100V 16V 100V 100V 100V	Q1   Q2   Q3   Q4   Q5	8-729-177-43 8-729-245-83 8-729-245-83 8-729-109-53 8-729-109-53		2SC2458 2SC2458 2SD795A			
C23	1-108-389-00	MYLAR	0.1MF	10%	1000	İ	RES	<u>ISTOR</u>				
C24 C25 C26 C27	1-108-389-00 1-108-389-00 1-108-389-00 1-108-389-00	MYLAR MYLAR	0.1MF 0.1MF 0.1MF 0.1MF	10% 10% 10% 10%	100V 100V 100V 100V	R1 R2 R3 R4	1-246-465-00 1-246-465-00 1-246-465-00 1-246-521-00 1-246-473-00	CARBON CARBON CARBON CARBON CARBON	470 470 470 100K 1K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W 1/4W	
C28 C36 C39 C40 C41	1-108-389-00 1-108-389-00 1-123-380-00 1-102-961-00 1-123-296-00	MYLAR	0.1MF 0.1MF 1MF 27PF 220MF	10% 10% 20% 5% 20%	100V 100V 50V 50V 6.3V	R6   R7   R8   R9	1-246-493-00 1-246-493-00 1-246-469-00 1-246-477-00	CARBON CARBON CARBON CARBON	6.8K 6.8k 680 1.5K	5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
C45 C46 C47 C48 C50	1-108-389-00 1-101-006-00 1-123-332-00 1-123-297-00 1-102-074-00	CERAMIC	0.1MF 0.047MF 47MF 330MF 0.001MF	10% 20% 20% 10%	100V 50V 16V 6.3V 50V	R10 R11 R12 R13 R14 R20	1-246-509-00 1-246-475-00 1-246-475-00 1-246-475-00 1-246-493-00 1-246-497-00	CARBON  CARBON  CARBON  CARBON  CARBON	33K 1.2K 1.2K 1.2K 6.8K	5% 5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
C52	1-123-321-00	ELECT	220MF	20%	16V	K20	1-240-497-00	CARBON	10K	5%	1/4W	
	TRI	MMER_				R21 R22 R26	1-213-139-00 1-244-861-00 1-231-731-00	CARBON	470 330		1W 1/2W	F
CVI	1-141-181-11	CAP, TRIMME	R		ļ	R27 R28	1-231-731-00	COMPOSITION COMPOSITION	CIRCUIT	BLOCK		
	DIO	<u>DE</u>			ļ	R29					1 //14	
D1 D2 D3	8-719-911-19 8-719-100-68 8-719-100-36	DIODE RD13E	-B2			R31 R32 R35 R36	1-231-731-00 1-231-731-00 1-246-511-00				1/4W 1/4W 1/4W	
					ļ	R37	1-246-489-00		<b>4.</b> 7K		1/4W	

Ref.No.Part No.	Description	Remark
R39 1-246-477-00 R41 1-246-491-00 R42 1-246-417-00	CARBON 5.6K 5% 1/4W	
VAR	IABLE RESISTOR	
	RES, ADJ, CARBON 10K RES, ADJ, CARBON 10K	
COM	NECTOR	
V2 • :1-560-124-00 V4 • :1-560-124-00	PLUG, CONNECTOR (2.5MM PITCH) PLUG, CONNECTOR (2.5MM PITCH) PLUG, CONNECTOR (2.5MM PITCH) PLUG, CONNECTOR (2.5MM PITCH)	
V9 ♦:1-560-126-00	PLUG, CONNECTOR (2.5MM PITCH)	1
CRY	STAL	
X1 1-527-734-00	VIBRATUR, CRYSTAL	
		1

# **SERVICE MANUAL**



August, 1983

#### **SPECIFICATIONS**

Remote control system

Infrared control

Power requirements

3 V dc

2 IEC designation R03 batteries (size AAA)

Dimensions Weight

Approx.  $54 \times 165 \times 16 \text{ mm (w/h/d)}$ Approx. 100 g including batteries

Accessory supplied IEC designation R03 battery (2)



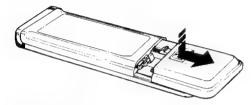
#### 1. REMOTE CONTROL OPERATION

-with the supplied RM-635 Remote Commander

#### **BATTERY INSTALLATION**

The Sony RM-635 Remote Commander operates on two supplied IEC designation R03 batteries (size AAA).

Remove the battery compartment lid.



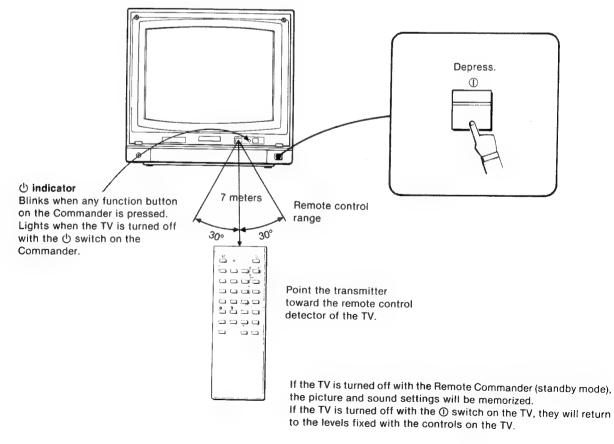
Insert batteries observing the correct polarity and close the lid.



### NOTES ON THE REMOTE COMMANDER

- In normal use, battery life is up to half a year. When the batteries are exhausted, the Commander will not operate the TV properly. If this happens, replace both batteries with new ones.
- When the Commander is not used for a long period of time, remove the batteries to avoid damage from possible battery leakage.
- Keep the Commander away from extremely hot or humid places.
- Avoid dropping any foreign object into the cabinet, particularly when replacing batteries.

#### **REMOTE TV OPERATION**



## FUNCTION OF THE BUTTONS ON THE REMOTE COMMANDER

Each button has different functions for normal TV, teletext and VTR operations.

Functions for operating the TV are indicated in WHITE.

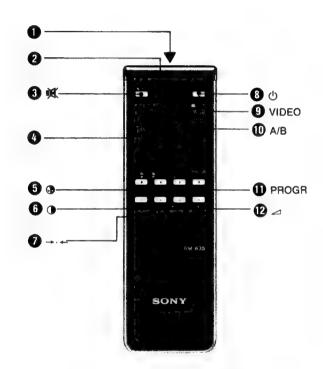
Functions for operating the video tape recorder\* are indicated in orange.

Functions for teletext operation using the optional OPK-103 teletext adaptor\* \* are indicated in green.

- \*This Remote Commander can control the Sony SL-F1E combined with the TT-F1 series tuner timer unit, and Sony SL-C9 series.
- \* \* A teletext adaptor is built into the KV-2056EC.

For details, please refer to the supplemental instruction manual furnished with the set.

#### **Buttons used for normal TV operations**



#### Transmitter

Point toward the remote control detector

#### Pilot lamp

Blinks when the Remote Commander is operating.

#### (sound mute) button

When you want to mute the sound, (to answer the telephone, for instance) press this button. To restore the sound, press this button again.

#### Program number buttons

Programs are displayed by pressing the corresponding numbers. For programs 1 through 9, press the appropriate single-digit button. For programs 10 through 19, first press the 1- button (the tensdigit "/" will blink on the program indicator), then the button corresponding to the last digit of the program number (the tens-digit will now stop blinking).

For example: for program 10, press 1- and 0. for program 11, press 1- and 1.

For programs 20 to 29, press the 2- button and then the single-digit button.

For program 30, press the 0 button.

**Note:** If you do not press a single-digit button within several seconds after pressing the 1- or 2- button, the previous program setting will be automatically recalled.

#### 6 (color) buttons

Adjust the color intensity. Press the + button to increase it, or press the - button to decrease it.

#### 6 (picture) buttons

Press the  $\,+\,$  button to increase the picture contrast, or the  $\,-\,$  button to decrease it.

#### → · ← (normal) button

Pushing this button once instantly returns the color and contrast settings made with the ③ and ③ buttons on the Commander to the initial settings on the TV.

#### (standby) switch

Turns the TV in standby mode. The  $\circlearrowleft$  indicator on the TV will light up. To turn on the TV from the standby mode, press a program number button or the  $\rightarrow$   $\hookleftarrow$  button on the Commander.

#### O VIDEO button

Functions the same as the TV/VIDEO select button on the TV.

#### A/B button

Functions the same as the ZWEITON button on the TV.

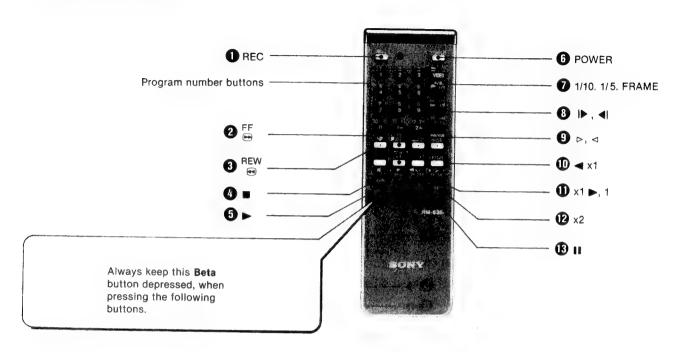
#### PROGR (program) buttons

Function the same as the PROGR select buttons on the TV.

#### ② ∠ (volume) buttons

Press the + button to increase the volume, or press the - button to decrease it.

#### **Buttons used for VTR operations**



#### Buttons which have the same functions for both SL-C9 series and SL-F1E

#### **●** REC (record) button

Press to start recording.

forward picture-search operation.

### € REW (rewind) button

Press to rewind the tape. This button is also used for the reverse picture-search operation.

#### 

Press to stop the tape.

#### 

Press to play the tape back.

#### 6 POWER switch

Press to turn the video tape recorder (and the tuner timer unit) on or

#### 2 x2 (double-speed) button

Functions the same as the x2 button on the video tape recorder. Press to obtain a double-speed playback picture.

#### 11 (pause) button

Functions the same as the II PAUSE button on the SL-C9 series and the PAUSE button on the SL-F1E. To release the pause mode, press this button again.

#### **Buttons used for the SL-C9 series**

#### Speed control buttons (1/10, 1/5, FRAME)

Function the same as the 1/10, 1/5 and FRAME of the SPEED CON-TROL buttons on the recorder.

#### 

Select the direction of the speed control playback, Function the same as the ⊳ and ⊲ buttons of SPEED CONTROL buttons on the recorder.

#### 1 (normal speed) button

Functions the same as the 1 button of the SPEED CONTROL buttons on the recorder.

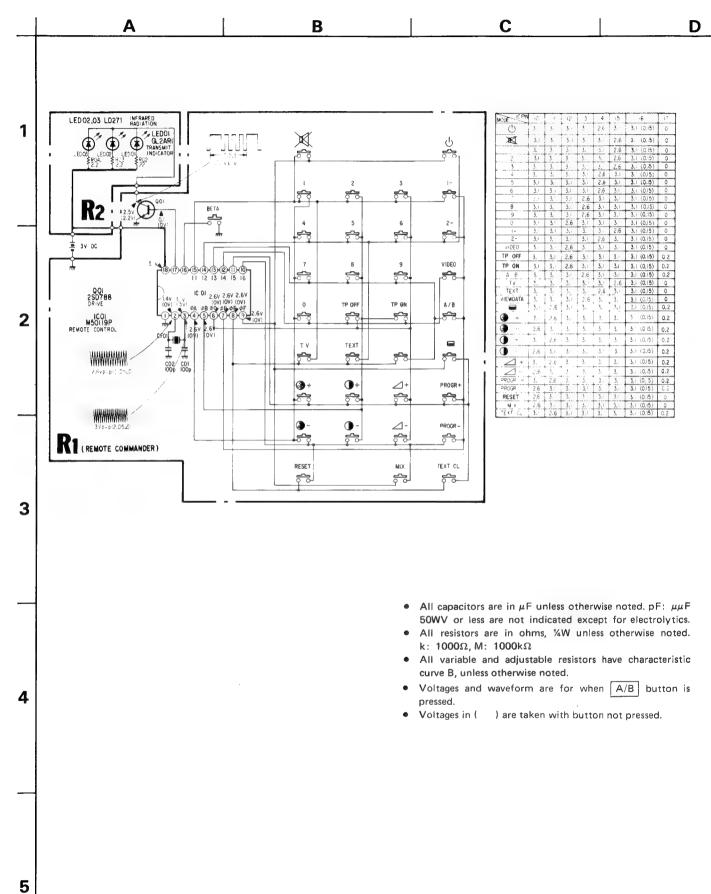
#### Buttons used for the SL-F1E

Function the same as the I▶ and ◀I SWING SEARCH buttons on the SL-F1F

#### 

Function the same as the ◀ and ► SWING SEARCH buttons on the SL-F1E.

#### 2. SCHEMATIC DIAGRAM



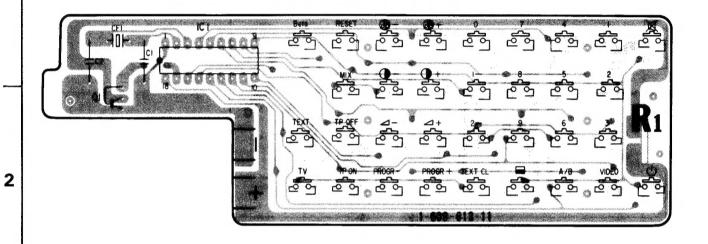
1

#### 3. PRINTED WIRING BOARDS

- Conductor Side -

A B C D

- R1 Board -



- R2 Board -



M50119P

(Top view)

2SC1474 2SD788



2SD773



GL-2AR1



LD271



SE303A SE303AX SE303AY



5

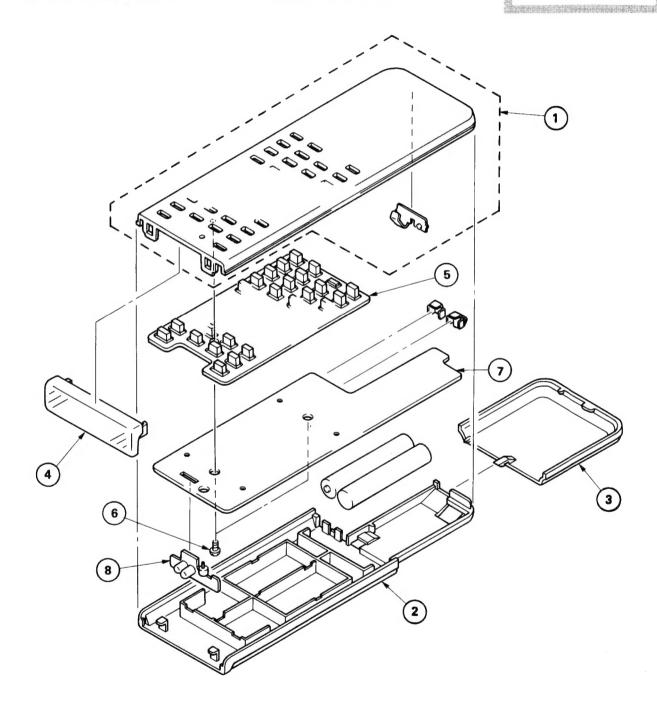
4

3

#### 4. EXPLODED VIEW

- NUIL:
   Items with no part number and no description are not stocked because they are seldom required for routine service.
   The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark A are critical for safety. Replace only with part number specified.



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1 2 3 4	4-361-948-00 4-361-945-00	CASE (UPPER) ASSY, COMMANDER CASE (LOWER), COMMANDER COVER, BATTERY PANEL, FRONT, COMMANDER		:			

#### 5. ELECTRICAL PARTS LIST

The components identified by shading and mark <u>A</u> are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Remark

Items marked " ♣ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

 All variable and adjustable resistors have characteristic curve B, unless

CAPACITORS ۰ MF : بالربر F, PF : بالرب

RESISTORS All resistors are in ohms
F: nonflammable

COILS • MMH : mH, UH : µH

otherwise noted. Ref.No.Part No.

> ♦:1-608-613-00 R1 B0A RD 4-348-542-00 TERMINAL (A), BATTERY 4-348-543-00 TERMINAL (B), BATTERY

Description

CAPACITOR

1-161-271-00 CERAMIC 1-161-271-00 CERAMIC C01 100PF 500 C02 100PF 50V

FILTER

1-527-476-00 OSCILLATOR, CERAMIC CF01

ICO1 8-759-600-07 IC M50119P

TRANSISTOR

8-729-177-32 TRANSISTOR 2SD773

\*\*\*\*\*\*\*\*\*\*\*\*

♦:1-608-614-00 R2 BOARD

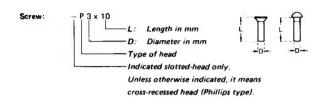
DIODE

LEDO1 8-719-900-23 DIODE GL2AR1 LEDO2 8-719-107-82 DIODE SE303AY LEDO3 8-719-107-82 DIODE SE303AY

RESISTOR

1-247-791-00 CARBON 1-247-767-00 CARBON 1-247-767-00 CARBON R02 1/6W 2.2 R03 1/6W R04

### HARDWARE NOMENCLATURE



Reference Designation	Shape	Description	Remarks
		SCREWS	
Р	€∋	pan-head screw	binding-head (B) screw for replacement
PWH	€13	pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP	₩2	pan-head screw with spring washer	binding-head (B) screw and spring washer for replace- ment
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R	<b>€</b> 3	round-head screw	binding-head (B) screw for replacement
Κ .	Ð	flat-countersunk-head screw	
RK	<b>6</b> 3	oval-countersunk-head screw	
В	æ	binding-head screw	
T	<b>P</b>	truss-head screw	binding-head (B) screw for replacement
F	₽□	flat-fillister-head screw	
RF	€□	fillister-head screw	
BV	€3	brazier-head screw	

Nut, Washer,	Retaining ring:
	N 3
	Diameter of usable screw or shaft
	Reference designation

Reference Designation Shape		Description	Remarks			
		SELF-TAPPING SCRE	ws			
TA		self-tapping screw	ex: TA, P3 x 10			
PTP	<del></del>	pan-head self-tapping screw	binding-head self- tapping (TA, B) screw for replacement			
PTPWH	<b>=</b>	pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement			
PTTWH	<b>(1)</b>	pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacemen			
		SET SCREWS				
SC	E 3	set screw				
sc 🌘 🗀		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket			
		NUT				
N	-[]-@-	nut				
		WASHERS				
W	0	flat washer				
SW	- 4·	spring washer				
LW	0	internal-tooth lock washer	ex: LW3, internal			
LW		external-tooth lock washer	ex: LW3, external			
-		RETAINING RINGS				
E	0	retaining ring				
G	@	grip-type retaining ring				